ENVIRONMENTAL IMPACT STATEMENT
SALT WYND PRESERVE SUBDIVISION
PARCELS 731609167703000, 731609153648000, 731609066438000, 731609161556000
BEAUFORT, CARTERET COUNTY, NORTH CAROLINA

ASE PROJECT NO. 1555

FOR

BEAUFORT AGRIHOOD DEVELOPMENT, LLC
APRIL 28, 2022

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1.0 PURPOSE AND NEED

1.1 Proposed Project Description

The site consists of approximately 85.79 acres of land located along Live Oak Street and Pinners Point Road (herein "Property") (see Figure 1, 2 and 3) in the extraterritorial jurisdiction (herein "ETJ") of Beaufort, Carteret County, North Carolina (herein "Town").

The Property is situated within an existing residential and commercial setting of the Town. The Property is predominately undeveloped and wooded. There is a small 5.5-acre portion of parcel 731609161556000 that is currently developed with commercial, residential and mobile homes, utilizing private water and sewer. The Property is situated along the shores of the North River and areas of regulated wetlands are present on the Property.

Beaufort Agrihood Development, LLC is proposing to develop the upland portions of the property into eighty-one (81) residential lots, in two phases. The development will also restore the existing dormant farm into an eleven (11) acre private farm for growing fruits and vegetables while incorporating animal husbandry promoting biodiversity and utilizing natural farming techniques. The open space of the farm is required for the low density stormwater program, thereby ensuring that it will not be developed, in perpetuity.

1.2 Purpose and Need for Action

The ETJ is defined within the Town of Beaufort North Carolina Core Land Use Plan adopted December 11, 2006 (herein "CLUP") as areas of existing growth capable of accommodating regional growth influences while protecting the essential character and environment of the Town. The Property is located within the ETJ and zoned R-20. The CLUP concludes that the future land use of the Property (see Figure 4) is General Commercial along the Live Oak Street frontage and Low Density Residential on the remainder of the Property. The support for future development of the Property is further documented within the CLUP as the Property is deemed High Suitability for all of the Property except the roughly mapped Coastal and 404 wetlands areas which are documented as Least Suitable (see Figure 5).

The development will provide 81 residential building lots and a planned private farm for the development and local community. This influx of families will bring tax dollars to the Town and Carteret County, as well as increased revenue to local businesses and services. The private farm will provide a local sustainable source of produce for the local communities. The CLUP documents that the existing use for parcels 731609167703000 and 731609161556000 was Commercial and parcels 731609153648000 and 731609066438000 was Undeveloped (see Figure 6).

The CLUP is an important foundational document for the planning of future expansion within the Town and informed the current Beaufort Land Development Ordinance (herein "LDO"), adopted November 4, 2013, which regulates all structures and lands within the Town corporate limits and the ETJ and the current Town Official Zoning Map (see Figure 7). The Beaufort LDO (Section 7A R-20 Residential Single-Family District), allows lots for single family homes to have a minimum

size of twenty thousand square feet (20,000). The Property fully conforms to all R-20 zoning requirements, no variances have been requested nor are required and the Property will have an overall density of .94 units per acre, far less than the 2 units per acre allowed for the R-20 district.

2.0 ALTERNATIVES

Two alternatives, action and no action, are carried forward for this evaluation in the Environmental Impact Statement (EIS).

2.1 Alternative A – No Action

The alternative to the proposed development is "no build" which would deny the property owner the lawful use of the land for one of the permitted uses, Home Occupation under LDO Section 7. This alternative would have a negative impact on the local economy whereby the tax value would remain the same (no increase) and additional consumers will not be brought into the community.

The private farm will not be constructed and cannot provide fresh local produce to the community.

The Property will not have daily land management as it has historically had limited management and the result is tires and debris collecting in the environmentally sensitive areas and swales along the abutting right of ways. Forestry and fire prevention best practices will not be completed as previously, clear cut forestry activities have taken place on the 731609161556000 parcel.

2.2 Alternative B – Preferred Action

The preferred alternative is to develop the upland portions of the property into eighty-one (81) residential lots, in two phases. The development will also include a private farm using sustainable and chemical free farming practices for consumptive use in the neighborhood and surrounding communities. The development design will conserve all of the wetlands on-property and will maintain trees greater than 5 inches in diameter that are not in the footprint of the building pads or infrastructure (street, sidewalks and drainage swales). The Property, through deed restrictions, requires a tree survey and stormwater management plan be completed by licensed professionals for each lot so that all existing vegetative conditions may be considered prior to the approval of a site plan by the Architectural Review Board, a part of the Home Owners Association (herein "HOA").

All eighty-one (81) lots are single family residential lots and will maintain their existing R-20 zoning and Town water and sewer services have been requested. The development serves to meet all of the relevant objectives of the Town CLUP and LDO for low density residential development within an ETJ. Pervious pavement will be utilized for all for the roads, sidewalks and driveways.

Design layout of the development features, are based upon the current Town LDO and NCDEQ's CAMA and wetland requirements. The Property development layout reflects best management practices regarding avoidance and/or minimization of adverse impacts on the environmental resources within the development area.

The proposed low density stormwater management system meets and exceeds the criteria for water quality and flood control in the Town. Alternative designs were investigated in consideration of the existing Property limitations (i.e. depth to groundwater, topography) and the proposed design provides the best water quality and flood control.

The resulting design is consistent with applicable Town CLUP and LDO. The design features described above, together with the protection of wetland and wetland buffer areas, use of native species in the landscaping plan, adherence to the Soil Erosion and Sediment Control Plan, utilization of the Town water and sewer facilities are the primary mitigating measures incorporated into the development design.

The property is currently not being maintained. Nonnative invasive species are prevalent at the site. Debris and tires have been allowed to accumulate in sensitive areas. This proposed action will eradicated the invasive species while maintaining a vegetated community, resorting native species to the site. The redevelopment activities would also restore the sensitive areas to their natural state by removing the debris and tires. This removal will be conducted with Army Corp of Engineers and CAMA involvement to ensure that the sensitive areas will not be impacted.

After reviewing a variety of alternatives permitted under the LDO, it was determined that the development, as proposed, will have a lessened impact on the Property, surrounding properties and the Town as a whole. The mitigating measures included in the Property design should offset any potential adverse impact associated with the development.

3.0 AFFECTED ENVIRONMENT

This section describes the affected environment (existing setting or baseline conditions).

3.1 Topography

According to the United Stated Geological Survey (USGS) Beaufort North Carolina quadrangle dated 2019, (Figure 1) the Property is relatively flat (0-3% slopes) and lies at an elevation of approximately 0 to 10 feet above the North American Vertical Datum of 1988. The properties drain in a southeasterly direction toward Gibbs Creek. Gibbs Creek is classified as S.A.-H.Q.W. waters by the North Carolina Department of Environmental Quality (NCDEQ) and is designated as saline, tidal shellfish waters of high quality.

The development Property lies within the outer coastal plain physiographic province. The development Property is located within the Coastal Plain geomorphic province. The geologic framework of the Coastal Plain is one of underlying gently southeastward dipping unconsolidated clays, marls, silts and sands of the tertiary (65 to 1.75 million years ago) period.

The geologic formation consists of surficial deposits of sand, clay, and gravel.

3.2 Soils

According to the Natural Resources Conservation Service Web Soil Survey (WSS) (see Appendix II), much of the Property is AaA, Altavista loamy fine sand, this is a moderately well drained soil with a slope of 0-2%. Tm, Tomotley fine sandy loam (less than 20% of the site) and StA, State loamy fine sand also appear on the Property. Tomotley drains poorly and is sloped 0-2% while the State drains well with a slope of 0-2%. Small percentages of Ag, Augusta loamy fine and water were also detected.

Larry F. Baldwin, NCLSS, with Land Management Group preformed soil testing for infiltration in January 2022 of proposed lot No. 52. The results of that testing did identify the lot as having suitable infiltration rates for a subsurface residential wastewater system. The estimated seasonal high water table was between 15 - 23 inches from the present surface. Estimated permeability is 30 - 60 min/in (1 - 2 in/hr) to ~18 inch depths and 60 – 120 min/in (0.5 – 1.0 in/hr) below 18 inch depths.

3.3 Land Use

Parcel ID	Current Use	Past Use
731609167703000	42.39 acres – This area primarily consists of wooded land with logging access roads.	The tract has been wooded since at least 1993, but appears to have been used for sylviculture sometime prior to that.

731609153648000	25.84 acres – This parcel consists of wooded land with the western portion being former agricultural fields. Logging access roads are present.	This tract was historically used as agricultural and sylviculture.
731609161556000	9.93 acres – This parcel is partially wooded with singlewide homes located on the northern portion of the tract.	This tract was historically used as agricultural and sylviculture
731609066438000	7.92 acres – This parcel primarily consists of former agricultural fields.	This tract was historically used as agricultural and sylviculture

See Figure 2 for Parcel delineations.

3.4 Wetlands

Section 404/401 and Coastal Area Management Act (CAMA) wetland areas have been evaluated, delineated, and surveyed for approval by the USACOE and CAMA. The 404 and CAMA wetlands cannot be filled or developed unless Federal & State permitting approvals can be attained, which requires due need, avoidance, minimization, and full mitigation for any permitted wetland impacts. No impacts to wetland areas are proposed within this development plan.

A portion of the Property (parcel 731609167703000) is adjacent to the Gibbs Creek area of the North River which is designated by the North Carolina Department of Environmental Quality (NCDEQ) as SC (Tidal Salt Water) HQW (High Quality Waters) (see Figure 8 and 9).

This parcel and parcels 731609161556000 and 731609153648000 contain 404 wetlands and two jurisdictional tributaries (see Appendix III).

The NCDEQ Division of Water Resources GIS mapping system classifies the coastal areas abutting the Property as SC (Tidal Salt Water) and HQW (High Quality Waters). The existing recorded deed for parcel 731609167703000 was completed prior to the changes in private coastal water ownership, therefore, the Property will deed the ~1.55-acre remnant area of coastal wetlands to the State of North Carolina with the recordation of the Preliminary Plat.

The Property has been working with NC Division of Coastal Management (herein" NCDCM") regarding development within the Area of Environmental Concern (herein "AEC") and the local representative of NCDCM has visited the Property and completed the requisite validation of the NHW survey by Stroud Engineering (herein "Stroud") thereby assuring the accuracy of the Boundary, Section 404/401 and NHW survey information on the Preliminary Plat (see Figure 10).

The North River and specifically Gibbs Creek adjoin the Property - according to the NC Department of Marine Fisheries these local areas are not Primary, Permanent Secondary or Special Secondary Nursery Areas. However, there is a Bottom Shellfish lease and a Water Column Shellfish lease within .6 miles of the Property (see Figure 11 and 12).

3.5 Prime or Unique Agricultural Lands

According to the USDA Natural Resource Conservation Service, Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent.

"Unique farmland" is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

The development area meets one or more criteria for Non-Farmland. The Property is in an urban area. No farmland area will be affected or converted according to the Code of Federal Regulation 7 CFR 658.

3.6 Public Lands, Scenic, Recreational, and State Natural Areas

The Property will not impact municipal lands, scenic, recreational, or State Natural Areas. The following are State Natural Areas, State Parks, and scenic areas located near the Property.

- Theodore Roosevelt Natural Area at 1 Roosevelt Boulevard Pine Knoll Shores, NC 28512
    - 14.6 miles from the Property
- Rachel Carson Reserve at 101 Pivers Island Road Beaufort, NC 28516
    - 5.4 miles from the Property
- Shackleford Banks at Harkers Island
    - 12.7 miles from the Property

The following are recreational facilities near the Property.

- Eastern Athletic Club at 105 Professional Park Drive
    - 0.3 miles from the Property
- Snap Fitness at 1718 Live Oak Street
    - 0.7 miles from the Property
- The Beaufort Club at 300 Links Drive

- 3.1 miles from the Property
- North Carolina Maritime Museum at 315 South Front Street
  - 2.7 miles from the Property

3.7 Areas of Archaeological or Historical Value

Historic and archaeological resources may include objects, structures, shipwrecks, neighborhoods, districts, and manmade or man-modified features of the landscape and seascape, including archaeological sites, which either are on or are eligible for inclusion on the State or National Register of Historic Places. The Property is not listed on the National Registry.

3.8 Air Quality

Air Quality & Green House Gas Emissions

Carteret County is located in an area classified by the US Environmental Protection Agency (EPA) as being in attainment for all six criteria pollutants under the Clean Air Act (CAA). This means this is protected under several provisions of the CAA including the National Ambient Air Quality Standards (NAAQS) and the Prevention of Significant Deterioration (PSD) of Air Quality Program.

The development would result in a negligible increase of Green House Gas emissions (GHGs) from the use of construction equipment. Construction related activities would result in a localized increase of vehicle exhaust, emissions, and fugitive dust throughout the construction period. Periodic use (i.e. hourly) of various types of equipment (excavators, backhoes, trucks) over the construction period would produce limited emissions relative to those produced from future residents. Any increase in GHGs would cease once construction is complete; therefore, no long-term contribution of GHGs would occur under either Alternative discussed in this EIS.

3.9 Noise Level

The development would cause temporary and intermittent negative impacts to natural soundscapes during construction. Periodic use (i.e. hourly) of various types of equipment (bobcats, trucks, power equipment, chainsaws and chippers, etc.) over the construction period would produce sounds. These sounds would be limited to the working hours for the development (daylight hours).

Any increase in construction noise would cease once construction or maintenance activities are complete and would be limited to the workday during construction; therefore, no long-term impact to the soundscape would occur under Alternatives discussed in this EIS.

3.10 Water Resources

The majority of the property is located in a 500 or 100 year flood zone. The property along Gibbs Creek is classified as AE-6 signifying a flood stage of 6 feet (see Appendix IV).

The purpose of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters: It establishes effluent limitations for new and existing discharges into the U.S. waters, and authorized States to substitute their own water quality

management plans developed under Section 208 of the act for Federal controls. This act also provides an enforcement procedure for water pollution abatement and required conformance to a permit required under Section 404 for actions that may result in a discharge of dredge or fill material into a tributary, a wetland, or to an associated water source for a navigable waterway. Section 4.6 of 2006 Management Policies addresses water resource management including the protection of surface water and groundwater, water rights, water quality, and watershed and stream processes.

Wastewater treatment systems can influence groundwater and surface water nutrient loads and bacteria concentrations in some settings. Coastal soils are generally sandy with a shallow water table, increasing the potential for groundwater transportation of pollutants from the on-Property septic systems to surface waters. However, no subsurface treatment systems will be allowed within the development.

All eighty-one (81) lots are single family residential lots that will be serviced by Town water and sewer systems. The development has a low density stormwater program and each lot will have deed restrictions regulating maximum built-upon area, maximum stormwater runoff and minimum natural vegetation area. This Property's design, along with the deed restrictions assures the protection of the Property and its surrounding areas in perpetuity through legally enforceable standards.

3.11 Forest Resources

Croatan National Forest is located in Craven County, North Carolina. This is primarily a pine forest with some hardwoods. This national forest is located 31.5 miles from the Property.

Forest resources will not be significantly impacted.

3.12 Shellfish or Fish and Their Habitats

The North Carolina Division of Marine Fisheries administers the Shellfish Lease and Franchise Program for the purposes of shellfish cultivation, aquaculture and mariculture within the State of North Carolina. This area of the North River is an active shellfish nursery with several shellfish leases in the vicinity (see Figure 11 and 12).

"Water column" means the vertical extent of water, including the surface, above a designated area of submerged bottom land.

A proposed water column is located over ½ mile (approximately 0.68 miles) from the shore of the Property. A bottom is also located over ½ mile (approximately 0.55 miles) from the shore of the Property.

The design of the stormwater system is low density. The system is designed to handle the site storm water as well as the existing off-site storm water currently flowing in the existing swales along Pinner Point Road (see Figure 13 and 14). This off-site stormwater will have increased treatment prior to its discharge into the waterway. This treatment will reduce the particulate and sediment load that is currently entering the North River. The development, through its deed

restrictions of reducing stormwater flow and prohibition of the use of non-organic landscape products on the Property, assure that the stormwater quality will be compatible with promoting the aquaculture both within Gibbs Creek and the North River as a whole.

Diligent stormwater pollution prevention practices should be implemented during construction phases of the project to ensure sediment does not leave the site during these activities.

Based on the treatment of currently untreated off site storm water in the designed system, no on-site septic, and the deed restriction requirements for stormwater flow restrictions, there should be no impact, or a beneficial impact to the waterway with the preferred alternative. Based on this, there should be no adverse impact to the water column or the bottom.

3.13 Wildlife and Natural Vegetation

An official federal species list (consultation code 04EN2000-2018-SLI-0364) was obtained from the U.S. Fish and Wildlife (USFWS) Information for Planning and Conservation (IpaC) website (https://ecos.fws.gov/ipac/) on March 29, 2022 (see Appendix V). The list identified 14 threatened, endangered, or candidate species with the potential to occur within the development area. No critical habitats have been identified in the development area. All but two of these species were ruled out based on their preferred habitats. However, the following two species have the potential to be located on the Property.

- Red-cockaded Woodpecker (*Dryobates borealis*)
- Rough-leaved Loosestrife (*Lysimachia asperulaefoli*a)

Based on a Property visit conducted on April 20, 2022, neither Red Cockaded Woodpecker roosts nor Rough-leaved Loosestrife plants were observed within the Property boundaries.

Most vegetation is comprised of some native and non-native species. The majority of the vegetation within the development area is forest, which is a mixed pine-hardwood forest community. Vegetation is dominated by the combination of the following:

- White oak – *Quercus alba*
- Eastern black oak – *Quercus velutina*
- Longleaf pine – *Pinus palustris*
- American holly – *Hex opaca*
- Mountain laurel – *Kalmia latifolia*

Invasive non-native vine species are prevalent at the Property.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Topography

The topography of the Property will be minimally impacted. Some cut and fill will be required for infrastructure and building pads.

The general topography of the Property will not be altered.

4.2 Soils

The proposed development shall be permitted by NCDEQ and will comply with all stormwater requirements. All disturbed areas not occupied by improvements such as roads and houses will be vegetatively stabilized as required by the stormwater plan. The developer is requiring a vegetative buffer next to wetland and water front areas on all lots.

Due to the lack of elevational change on this property, significant soil erosion is not expected during construction.

4.3 Land Use

The Property does not have documented historical significant (see Figure 15). Historical resources will not be impacted. The use of the Property would change from undeveloped to single family residential. The development will be consistent with the following statutes and ordinances, herein collectively known as Relevant Regulations:

- Beaufort Land Development Ordinance ("LDO"), adopted November 4, 2013
- Beaufort Subdivision Ordinance ("SO"), adopted September 8, 1998 and amended August 8, 2005
- North Carolina Code of Ordinances Title V - Public Works and Title XV - Land Usage ("NCCofO")
- Town of Beaufort North Carolina Core Land Use Plan adopted December 11, 2006 ("CLUP")

Relevant Regulations, industry best practices and various other pertinent planning documents were utilized to prepare the Preliminary Plat application. This EIS addresses specific areas of proposed Property design (i.e., stormwater runoff, flooding) and potential impacts and steps taken to minimize or avoid adverse environmental impacts.

The current land use is residential, idle farmland and undeveloped land. The use of the Property will not change. However, the percentage of those uses will be altered, increasing the residential and farm uses.

4.4 Wetlands

A Section 404/401 wetland delineation, Normal High Water ("NHW"), Floodplain and topographic surveys have been conducted for the Property. Regulated wetlands are present on the

Property. Minimal impacts to the wetlands will be incurred for installation of the infrastructure. However an Army Corps of Engineers wetland permit will be obtained prior to the start of the development.

The Property has been working with NC Division of Coastal Management ("NCDCM") regarding development within the AEC and the local representative of NCDCM has visited the Property and completed the requisite validation of the NHW survey by Stroud thereby assuring the accuracy of the Boundary, Section 404/401 and NHW survey information on the Preliminary Plat (see Figure 3). The Property will construct two Stormwater Swales (#4 and #5) within the AEC and has begun the discussions with NCDCM for the requisite CAMA Major permit for these two improvements. These two swales are the only development within the AEC contemplated in the Preliminary Plat. A major CAMA permit will be obtained prior to the start of the development.

Neither wetland nor CAMA resources will be permanently impacted as a result of the proposed action.

4.5 Prime or Unique Agricultural Lands

No prime or unique agricultural land features exist onsite.

4.6 Public Lands, Scenic, Recreational, and State Natural Areas

No State Natural areas, recreational or public lands will be adversely impacted.

4.7 Areas of Archaeological or Historical Value

No areas of archaeological or historic value features exist onsite.

4.8 Air Quality

Decreased air quality because of air-borne dust associated with the proposed construction activities is a projected short-term impact. Methods to control soil erosion and sediment control will be implemented in order to minimize air quality degradation. Long-term degradation of air quality as a result of an increase in traffic is not expected.

The development proposes to construct roadways accessing the Property from three county roads. Increased traffic volume could potentially impact ambient air quality. Air quality impacts typically arise from traffic delays. No delays entering or exiting the Property are anticipated.

The proposed development by itself is not anticipated to result in a significant impact on ambient air quality.

4.9 Noise Level

The development would cause temporary and intermittent negative impacts to natural soundscapes during construction. Periodic use (i.e. hourly) of various types of equipment (bobcats, trucks, power equipment, chainsaws and chippers, etc.) over the construction period would produce sounds that are comparatively isolated. Some wildlife would be impacted by sounds produced from

construction and maintenance activities. These sounds would be limited to the working hours for the development (daylight hours).

Any increase in construction noise would cease once construction or maintenance activities are complete and would be limited to the work day during construction.

No long-term impact to the soundscape would occur under the preferred Alternative discussed in this EIS.

4.10 Water Resources

Wastewater treatment systems can influence groundwater and surface water nutrient loads and bacteria concentrations in some settings. However, the development will be connected to Town wastewater and water supply. Significant subsurface disruption will not occur and major impacts to groundwater resources are not anticipated.

The Town of Beaufort owns and operates municipal potable water and sanitary sewer service in Beaufort and is currently providing these services to nearby annexed parcels. Public sewer is currently available by an existing sewer main and Sanitary Lift Station #13 located in Live Oak Street, in front of the Food Lion grocery store. The Property will be serviced by Town sewer through a gravity main constructed between the Town's Sanitary Lift Station #13 to the Property's lift station. The 81 lots will be connected to the Property's lift station through gravity sewer mains constructed within the 50 'street right of way.

The 81 lots will be serviced by Town water through a looped 8" water main network constructed within the 50' street right of way and connected in two locations to the Town's existing 8" water main located on Pinners Point Road.

The Property is located in a county regulated under CAMA (see Figure 16), but is not located in a Coastal Barrier Resource area (see Figure 17). The Property will construct two Stormwater Swales (#4 and #5) within the AEC and has begun the discussions with NCDCM for the requisite CAMA Major permit for these two improvements. These two swales are the only development within the AEC contemplated in the Preliminary Plat. This permit will include removal of tires and other debris which have been dumped in the AEC at the properties edge.

Stormwater requirements will be met and exceeded through the use of low-density development standards which require <12% built-upon or impervious surfaces. In addition pervious pavement will be utilized on all streets, driveways, sidewalks, and trails. These construction standards virtually eliminate stormwater run-off by allowing typical storm rainfall events to infiltrate into the ground.

Project actions would not be expected to affect water resources within the development and surrounding areas.

4.11 Forest Resources

The intent of the development is to maintain the aesthetic of a wooded property after development. The Property, through deed restrictions, mandates that a minimum of 50% of each lot must be maintained in its current vegetative condition and prohibits clear cutting, with the exception of areas for roads, swales and deed restricted impervious home sites, which constitute less than 25% of the Property.

Trees larger than 5 inches in diameter will remain on the Property unless they are in the footprint of the infrastructure or building pads. While there will be a loss of trees in the preferred alternative, a significant canopy will remain over the majority of the Property. A benefit of the action will be to eradicate evasive vine species on the Property. The development will comply with the Beaufort Land Use Ordinance Chapter 244 and Tree Ordinance Chapter 100.

The proposed development is not expected to significantly impact the resources.

4.12 Shellfish or Fish and Their Habitats

The North River and Gibbs Creek are located along the eastern property boundary of the Property. According to the NC Department of Marine Fisheries, the areas adjoining the Property are not Primary, Permanent Secondary or Special Secondary Nursery Areas. The limited increase in stormwater runoff, increased cleansing of the off-site stormwater and prohibition of non-organic landscape products will not harm the existing aquaculture.

The proposed development is not expected to impact these resources.

4.13 Wildlife and Natural Vegetation

A minimal amount of upland forested wildlife habitat will be cleared and developed by the project. However a tree canopy will remain. No critical wildlife habitats are located on the Property.

The proposed development is not expected to significantly impact these resources.

5.0 MITIGATIVE MEASURES

5.1 Best Management Practices for Action Alternative

General Construction

- The contractor shall comply with all local, State and Federal laws and regulations.
- The development shall include a pre-construction meeting and a final inspection meeting, in addition to regularly scheduled development meetings and Property visits.
- Equipment must be free of any fluid leaks upon arrival to the work Property and would be inspected at the beginning of each shift for leaks. If the leak cannot be contained, leaking equipment would be removed off Property for necessary repairs before continuing construction.
- Fueling of any type, whether equipment or vehicles, must be done either on non-pervious surfaces such as concrete or asphalt, or a spill containment pad must be deployed during fueling.
- Equipment, material, and supply storage would be within approved areas only.
- Parking of personal vehicles would be in designated areas only.
- Migration of soils would be controlled by limiting the area of potential disturbance in concert with the maintenance of silt fencing and other required stormwater erosion measures in accordance with permit requirements during and after construction activities.

Air Quality

- To reduce noise and pollution emissions, construction equipment would not idle any longer than is necessary for safety and/or mechanical reasons
- All haul loads must be tarped.

Archeological Resources

- Should construction unearth cultural resources, work would be stopped in the area of discovery and consultation with the State Historic Preservation Office (SHPO) should occur

Lightscapes and Soundscapes

- Hours of outdoor construction would be limited to daylight hours, therefore, no artificial lighting would be needed.

Soil and Vegetation

- Construction zones would be identified (i.e. flagging, construction tape, etc.) to confine activity to the minimum work area required.
- Soil disturbance shall be minimized to the greatest extent possible to reduce disturbance to native plants.
- Erosion control measures that provide for soil stability and prevent movement of soil would be implemented, such as installing silt fencing along the edge of the of construction. Daily inspection of the silt fence will be conducted along the wetland and CAMA lines during construction and until vegetation is established.
- Exposed soil shall be seeded and mulched as soon as possible to prevent establishment of invasive plants and erosion.

Shellfish and Their Habitats/Wetlands

- Maintain stormwater erosion control measures until vegetation is established in new construction areas with particularly attention to those lots abutting wetlands of the Coastal zone.
- Maintain the least dense residential zoning (R20) possible
- Limit post development stormwater runoff to <10% of predevelopment levels
- Detain, store and reuse stormwater for native landscaping on each lot
- Pursue municipal water and sewer systems
- Preserve farmland and open spaces, in perpetuity, through deed restriction and impervious requirements of the Low-Density stormwater program
- Restrict existing vegetative destruction, mandate maximum built-upon area and prohibit non-organic landscape product through deed restrictions
- Maintain all stormwater systems on both common and private areas
- Establish Property as a community within the Town through annexation and payment of taxes
- Use pervious pavement on all roads, sidewalks and driveways
- Prohibit, by deed restriction, the use of all pesticides, lawn treatments, etc that are not organic, for use on the property

The development of the overall strategies to minimize all on and off property environmental impacts was coordinated with the input of both locally recognized environment experts (North Carolina Coastal Federation) and consultation of current, environmentally sensitive, development best practices.

Wildlife

- Construction personnel would be oriented on appropriate behavior in the presence of wildlife and the proper handling and disposal of food and /or other attractants.

6.0 CONCLUSIONS

Based on the information contained in this report, ASE concludes that there is a finding of No Significant Impact for the proposed alternative.

The direct environmental impact of the preferred action: There will be a removal of approximately 25% of the trees and an increase of approximately 12% impervious area on the Property. However, the design includes pervious pavement and on-site stormwater retention and reuse which allows the development to qualify for the Low-Density stormwater program. The development will facilitate additional surface area treatment for the existing, untreated stormwater, currently routed over the Property from the adjacent roadway swales and remove invasive species from the property. The proposed farm will be an environmentally friendly, local source of produce for the community and be preserved, in perpetuity, from future development.

Any significant adverse environmental effects which cannot be avoided should the proposal be implemented: Significant adverse environmental effects will not be incurred from the preferred action.

Mitigation measures proposed to minimize the impact: The preferred action is designed with a Low-Density stormwater program including pervious pavement, and deed restrictions on lots as they relate to built-upon area, removal of trees and preservation of the existing vegetation.

Alternatives to the proposed action: The alternative action is to not build the development, which prevents the owners by right use of their property and is inconsistent with the Town's policy for supporting growth and development at the densities specified in Section IV of the CLUP and Town Zoning Map.

The relationship between the short-term uses of the environment involved in the preferred action and the maintenance and enhancement of long-term productivity: The property is currently underutilized in its current capacity. The farm land is idle, the wooded areas are unmaintained and overgrown with invasive species. The preferred action would restore the Property's farmland to active production and remove the invasive vine species. Debris and trash have accumulated in sensitive areas of the site, the proposed development would restore and maintain these sensitive areas, in perpetuity.

Any irreversible and irretrievable environmental changes which would be involved in the proposed action should it be implemented: No irreversible and irretrievable environmental changes would be involved with the preferred action.

7.0 REFERENCES

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https://ecos.fws.gov/ipac/

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https://www.outerbanks.org/partners/budget-and-statistics/

EPA's Environmental Justice Screening and Mapping Tool
https://www.epa.gov/ejscreen

U.S National Oceanic and Atmospheric Administration Coastal Zone Management
US Coastal Zone Management Act Boundary - World | GIS Map Data | US National Oceanic and Atmospheric Administration (NOAA) | Koordinates

EPA's Sole Source Aquifers

NPS Wild and Scenic Rivers

NPS Historic Preservation Map

NPS Wetlands Mapper

NPS Coastal Barrier Resources

Kelly RileyLighthouse Technical Environmental Consultants

Larry F. Baldwin ,NCLSS, with Land Management Group

North Carolina Marin Fisheries https://deq.nc.gov/about/divisions/marine-fisheries

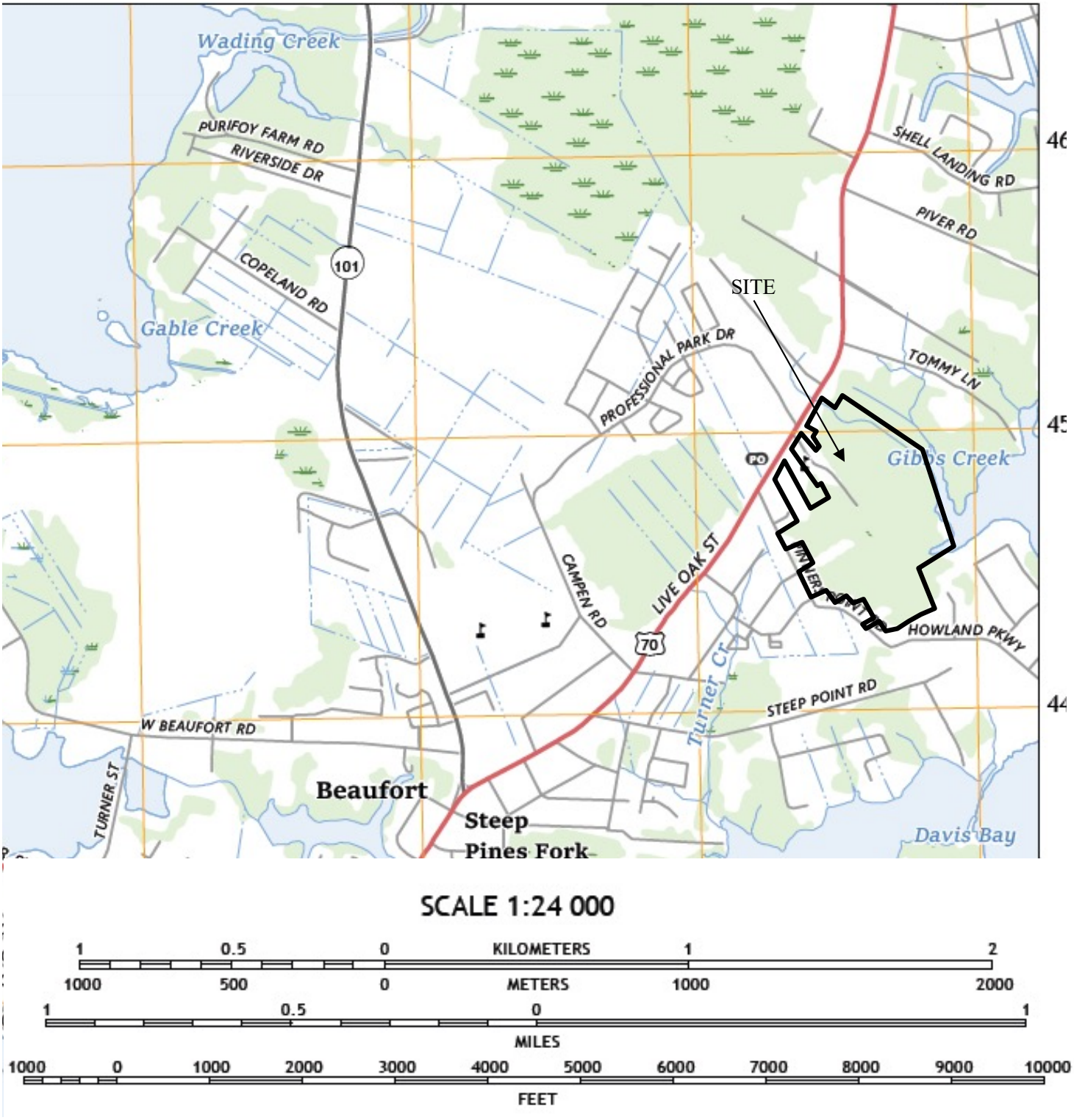
NCDEQ

https://nc.maps.arcgis.com

Appendix I – Figures

Appendix I – Figures

Figure 1 – USGS Topographic Map
Figure 2 – Tax Map
Figure 3 – ETJ
Figure 4 – Future Land Use
Figure 5 – Land Suitability
Figure 6 – Existing Land Use
Figure 7 – Zoning
Figure 8 – Surface Water Classification Tidal Salt Water
Figure 9 - Surface Water Classification ORW and HQW
Figure 10 – Proposed Plans
Figure 11 – Shellfish Nursery
Figure 12 – Shellfish Leasing
Figure 13 – Stormwater Flow
Figure 14 – Active Stormwater Permits
Figure 15 – Historic Preservation
Figure 16 – Coastal Zone Management
Figure 17 – Coastal Barrier



SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2

1000 500 0 METERS 1000 2000

1 0.5 0 1

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

FEET

FIGURE 1: TOPOGRAPHIC MAP

Source: USGS Beaufort Quadrangle 2022

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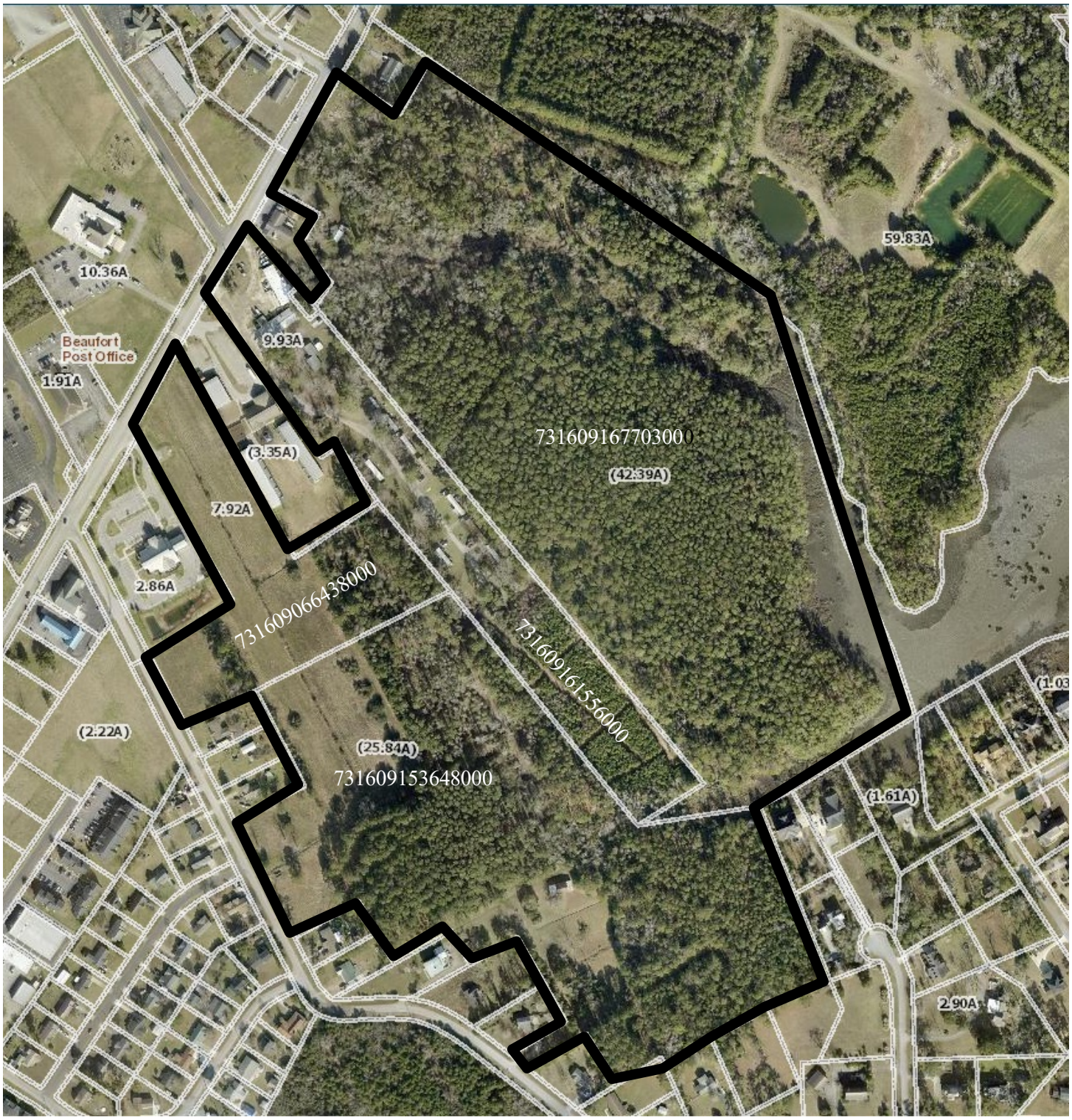
Salt Wind Preserve
Beaufort, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1555
April 2022



Not to scale

FIGURE 2: TAX MAP

Source: Carteret County GIS

N

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Beaufort, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1555
April 2022

BEAUFORT, NC

THE WOOTEN COMPANY

November 22, 2004

The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.

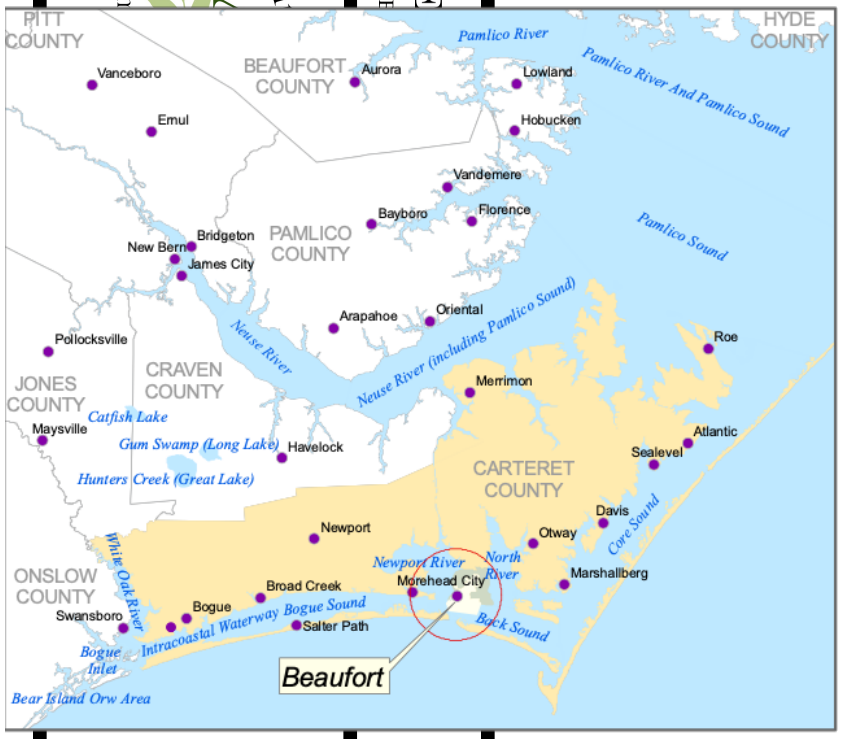
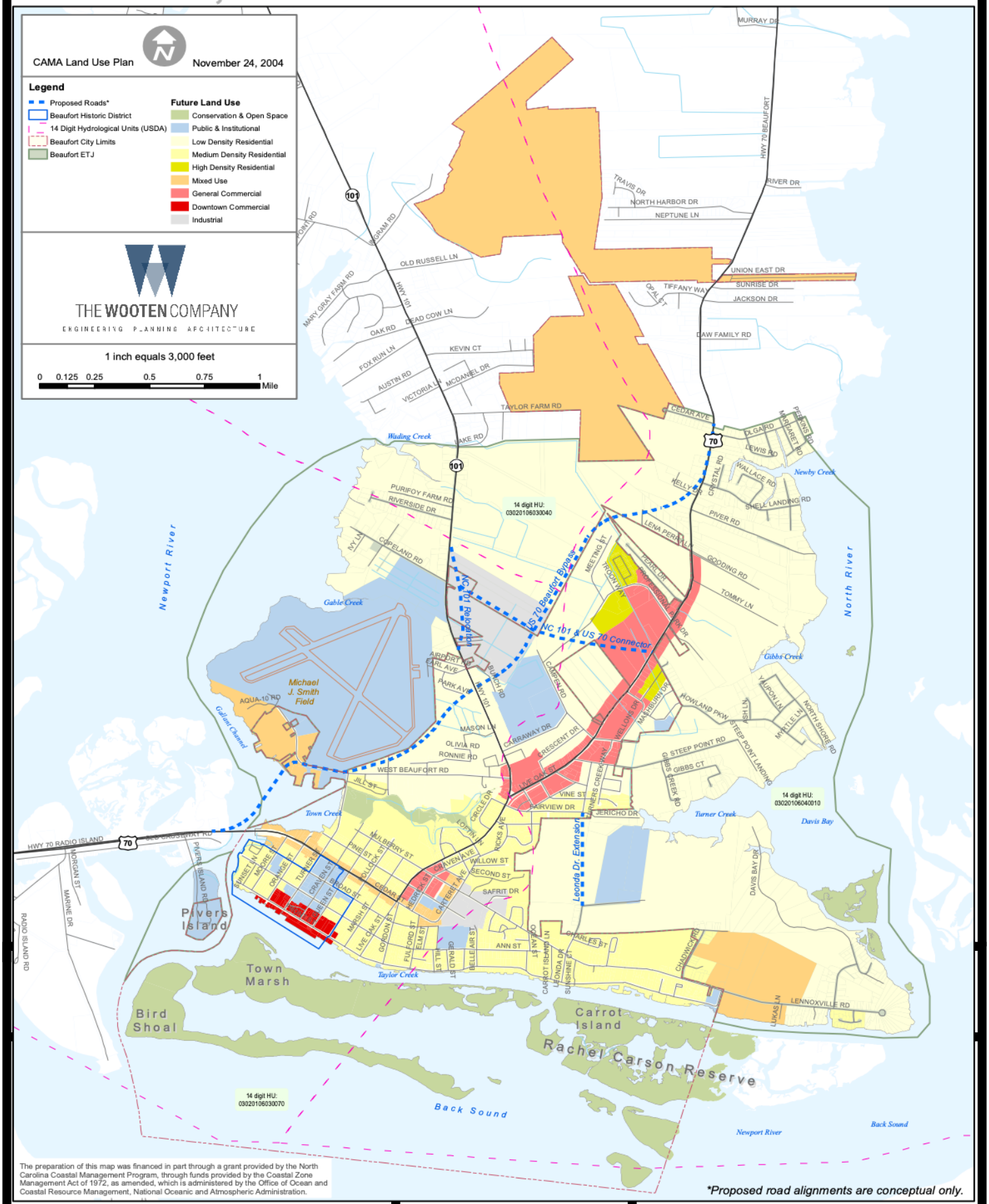


Figure 3 – ETJ

BEAUFORT, NC

Figure 4 – Future Land Use



BEAUFORT, NC

Figure 5 – Land Suitability

BEAUFORT, NC

Figure 6 – Existing Land Use

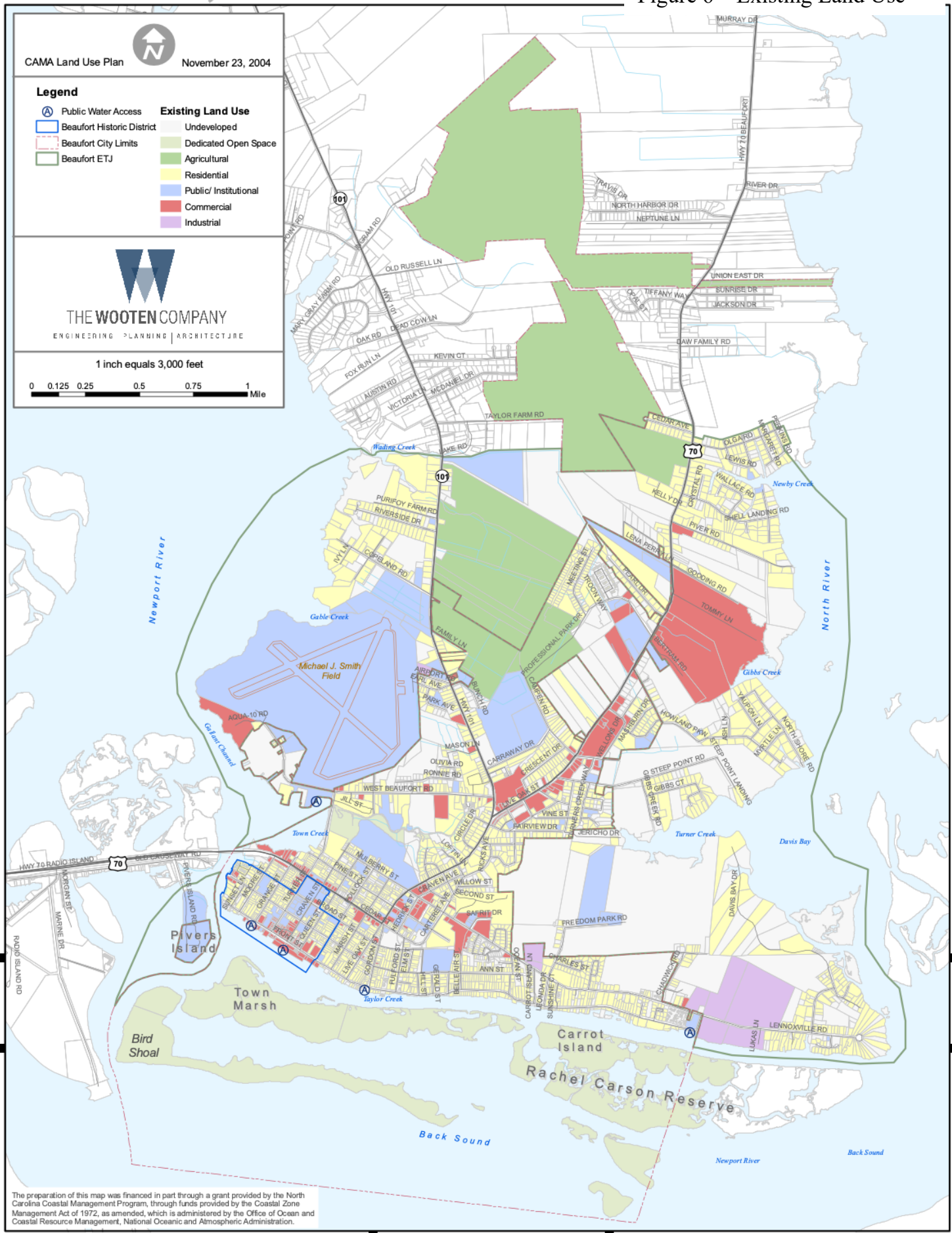
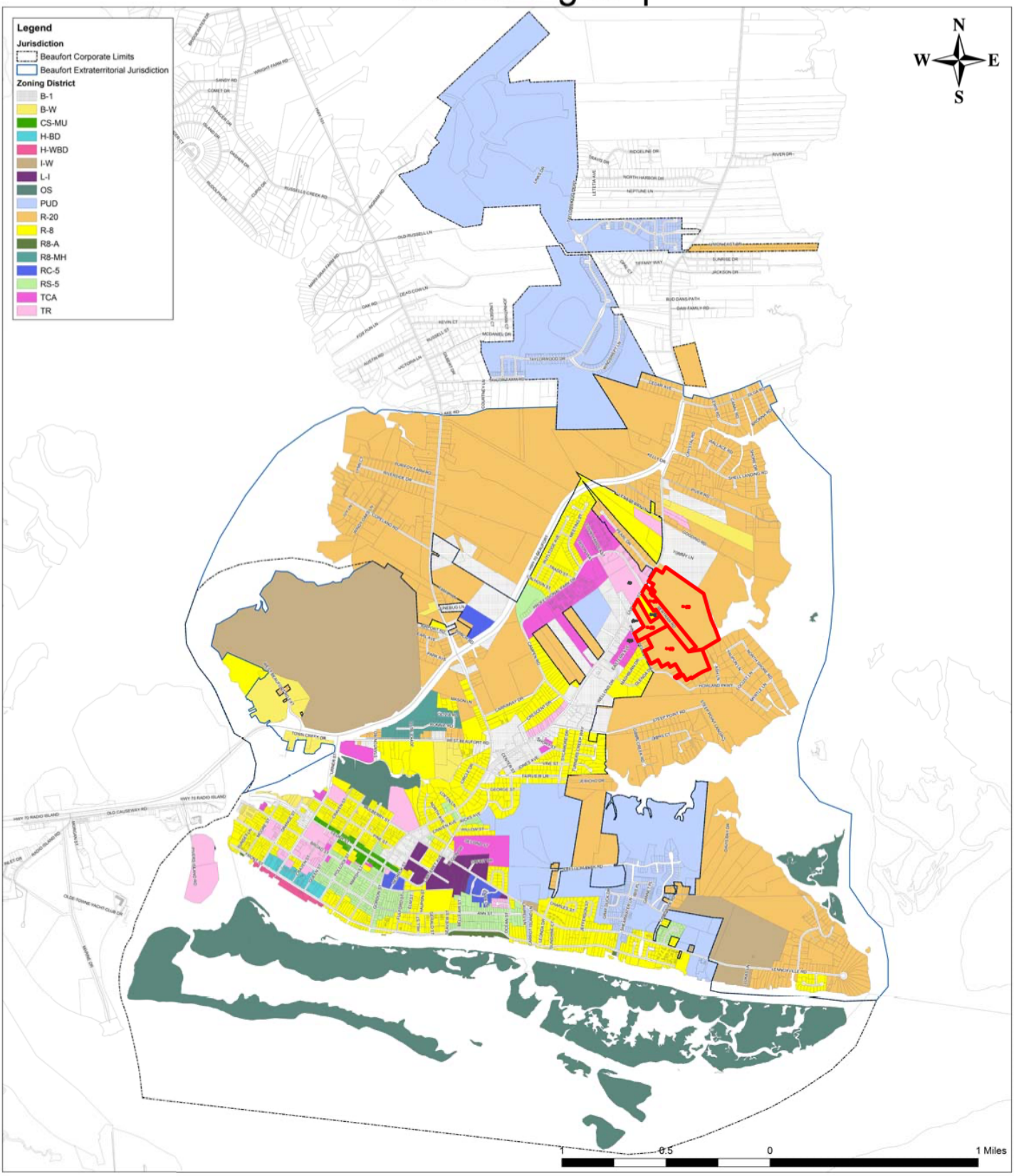


Figure 7 – Zoning

Town of Beaufort, North Carolina
Official Zoning Map



THIS IS TO CERTIFY THAT THIS IS THE OFFICIAL ZONING MAP OF THE TOWN OF BEAUFORT, NORTH CAROLINA.

THIS MAP ADOPTED THIS _____ DAY OF _____, _____ BY THE TOWN OF BEAUFORT BOARD OF COMMISSIONERS,

SHALL TAKE EFFECT AND BE IN FORCE FROM AND AFTER _____.

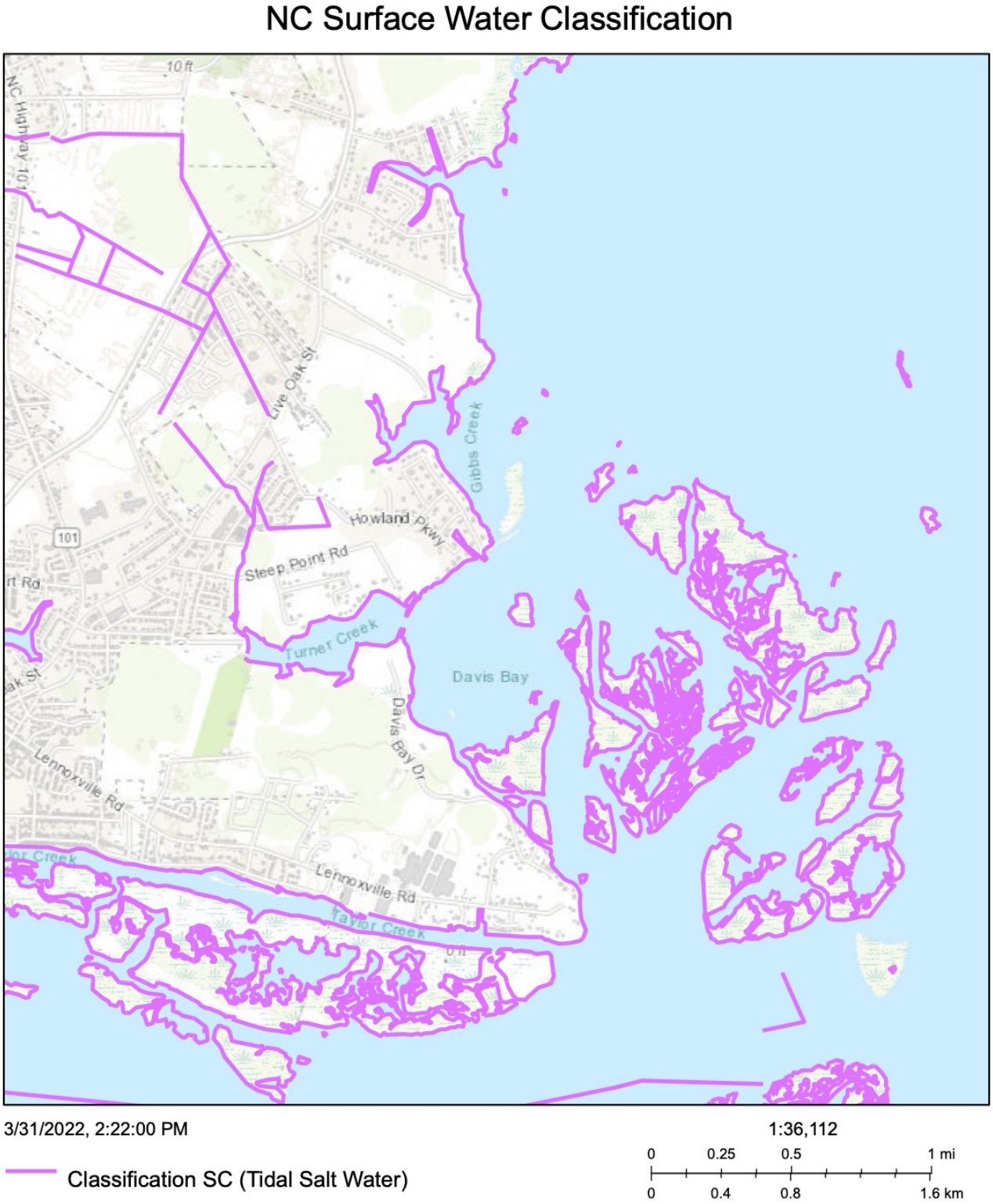
_____ MAYOR

_____ TOWN CLERK

BY OFFICIAL ACTION OF THE TOWN BOARD OF COMMISSIONERS, BEAUFORT, IN ACCORDANCE WITH THE AMENDMENT PROVISIONS OF THE LAND DEVELOPMENT ORDINANCE, THE FOLLOWING CHANGES WERE MADE TO THE OFFICIAL ZONING MAP

DATE	CASE NO.	DESCRIPTION OF CHANGE	MAYOR	ATTEST

Figure 8 – Surface Water Classification
Tidal Salt Water



NC Surface Water Classification

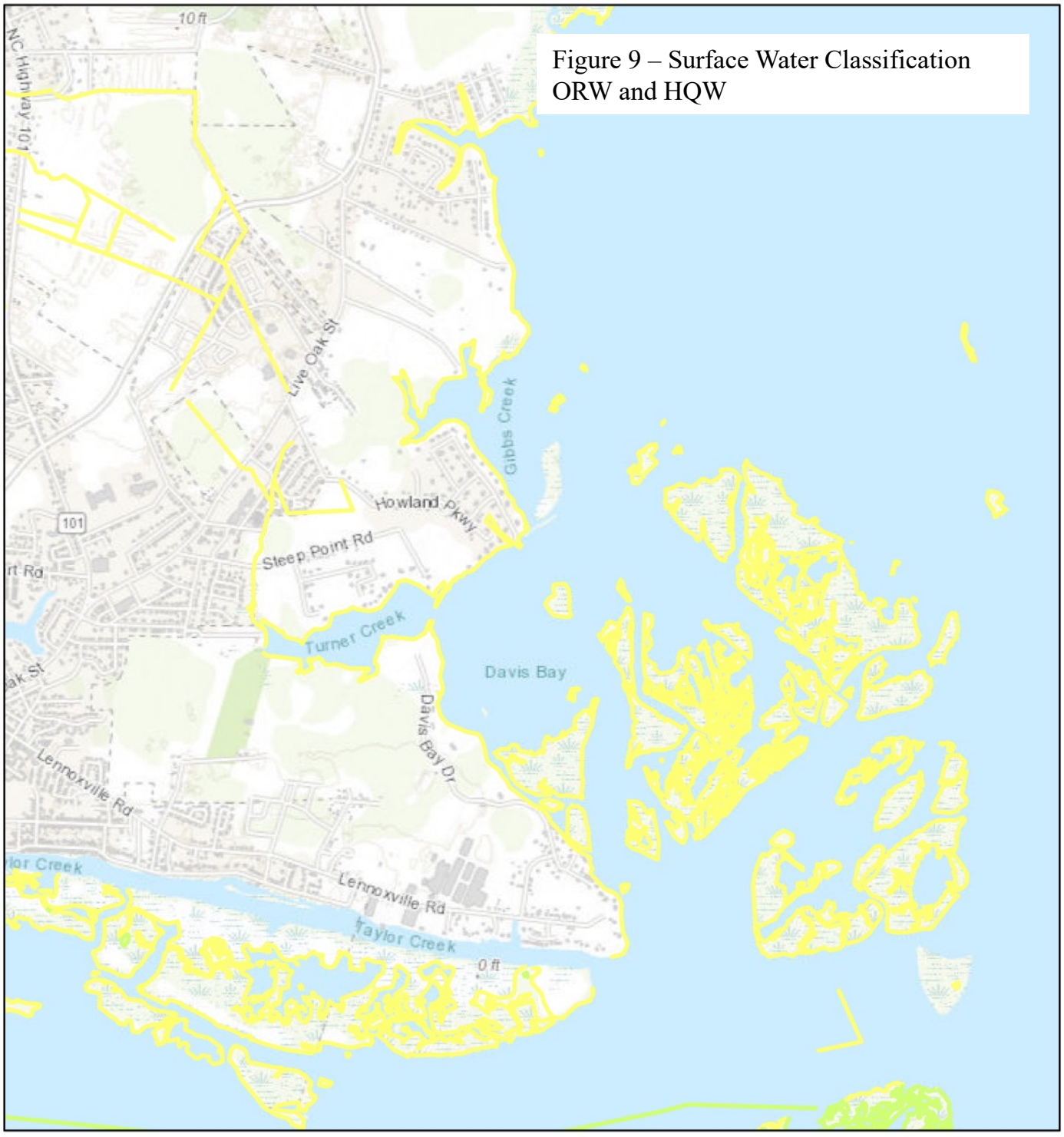


Figure 9 – Surface Water Classification ORW and HQW

3/31/2022, 2:23:03 PM

1:36,112

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

Classification ORW (Outstanding Resource Waters)

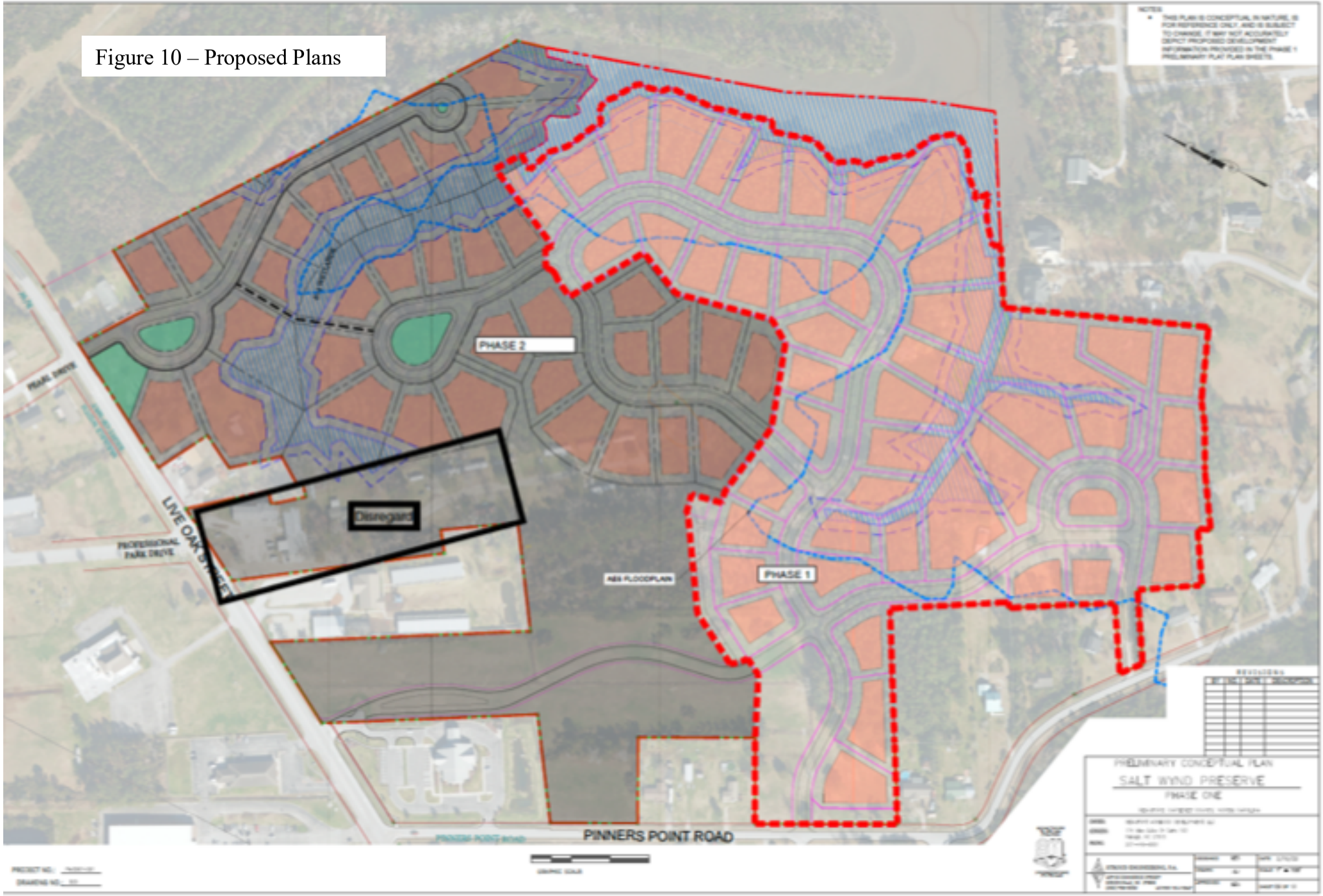
Classification HQW (High Quality Waters)

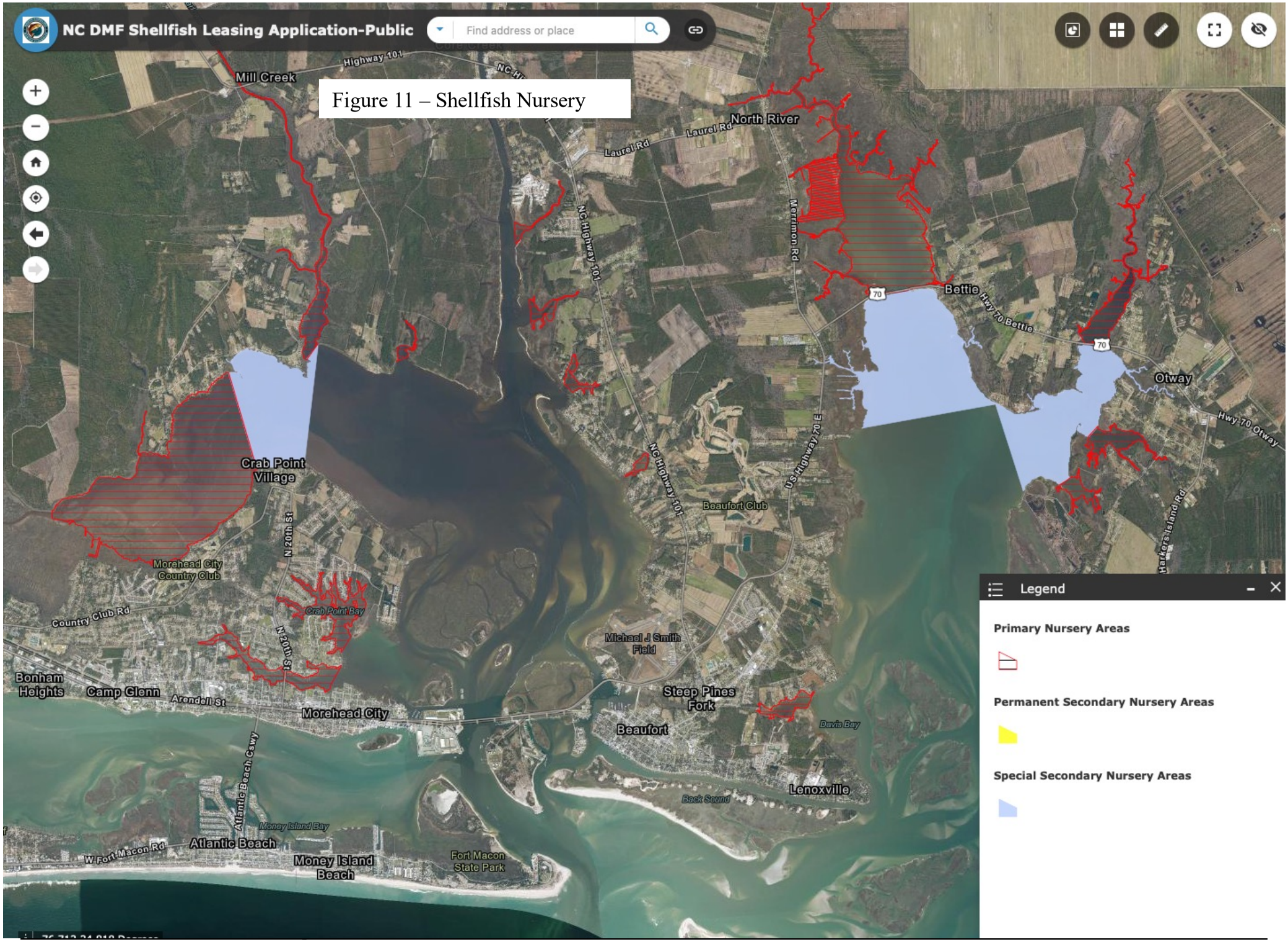
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

NCDENR Div. Water Resources

Carteret County, State of North Carolina DOT, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA | NCDENR - Division of Water Resources |

Figure 10 – Proposed Plans




NC DMF Shellfish Leasing Application-Public
Find address or place
Figure 11 – Shellfish Nursery
Mill Creek
Highway 101
Laurel Rd
North River
NC Highway 101
Merrimon Rd
Bettie
Hwy 70 Bettie
Otway
Hwy 70 Otway
Crab Point Village
Morehead City Country Club
N 20th St
Crab Point Bay
Country Club Rd
Beaufort Club
US Highway 70 E
Harkers Island Rd
Michael J Smith Field
Bonham Heights
Camp Glenn
Arendell St
Morehead City
Steep Pines Fork
Beaufort
Davis Bay
Atlantic Beach Cswy
Lenoxville
Back Sound
Money Island Bay
W Fort Macon Rd
Atlantic Beach
Money Island Beach
Fort Macon State Park
Legend
Primary Nursery Areas
Permanent Secondary Nursery Areas
Special Secondary Nursery Areas

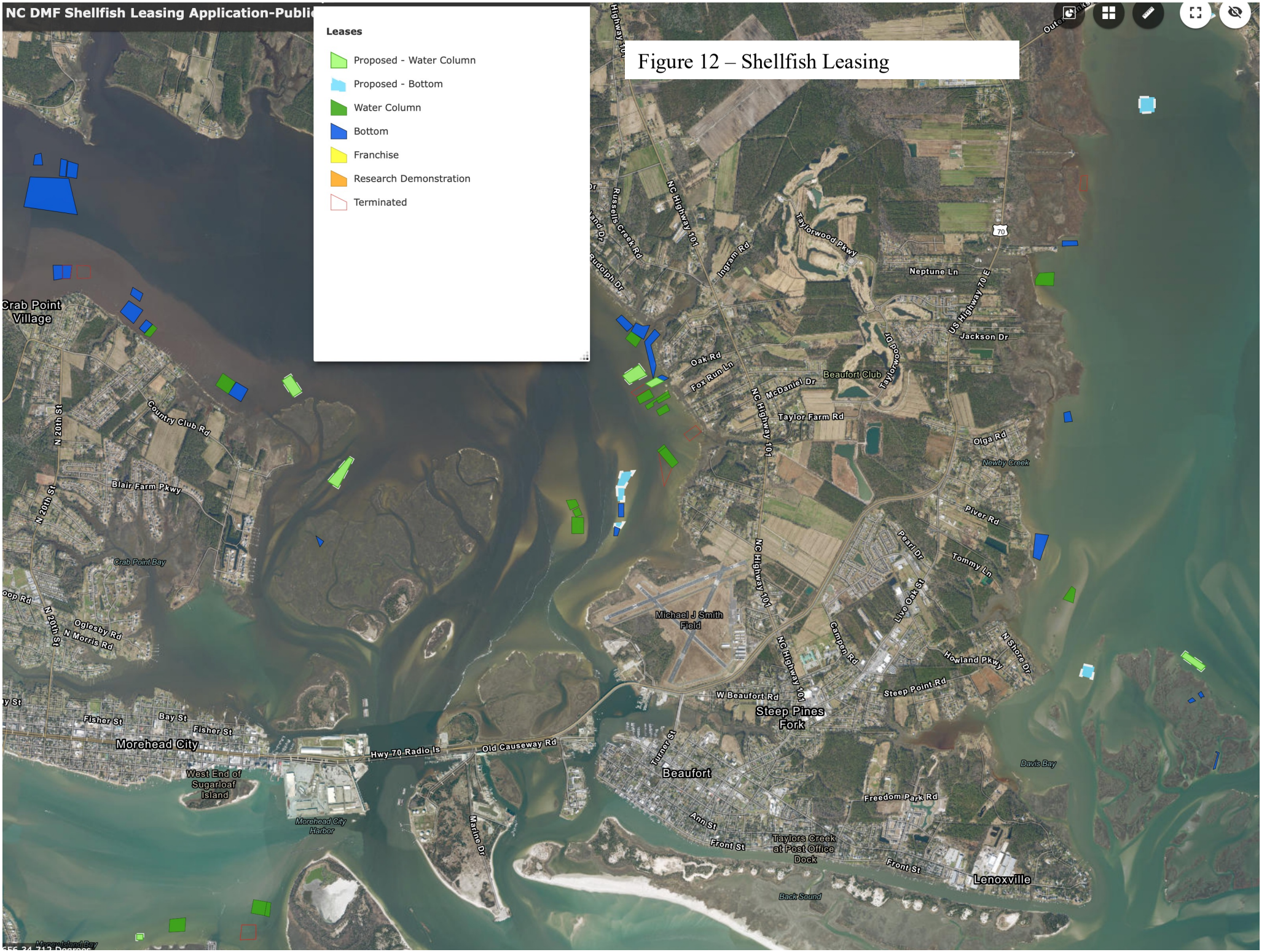


Figure 12 – Shellfish Leasing

Figure 13 – Stormwater Flow

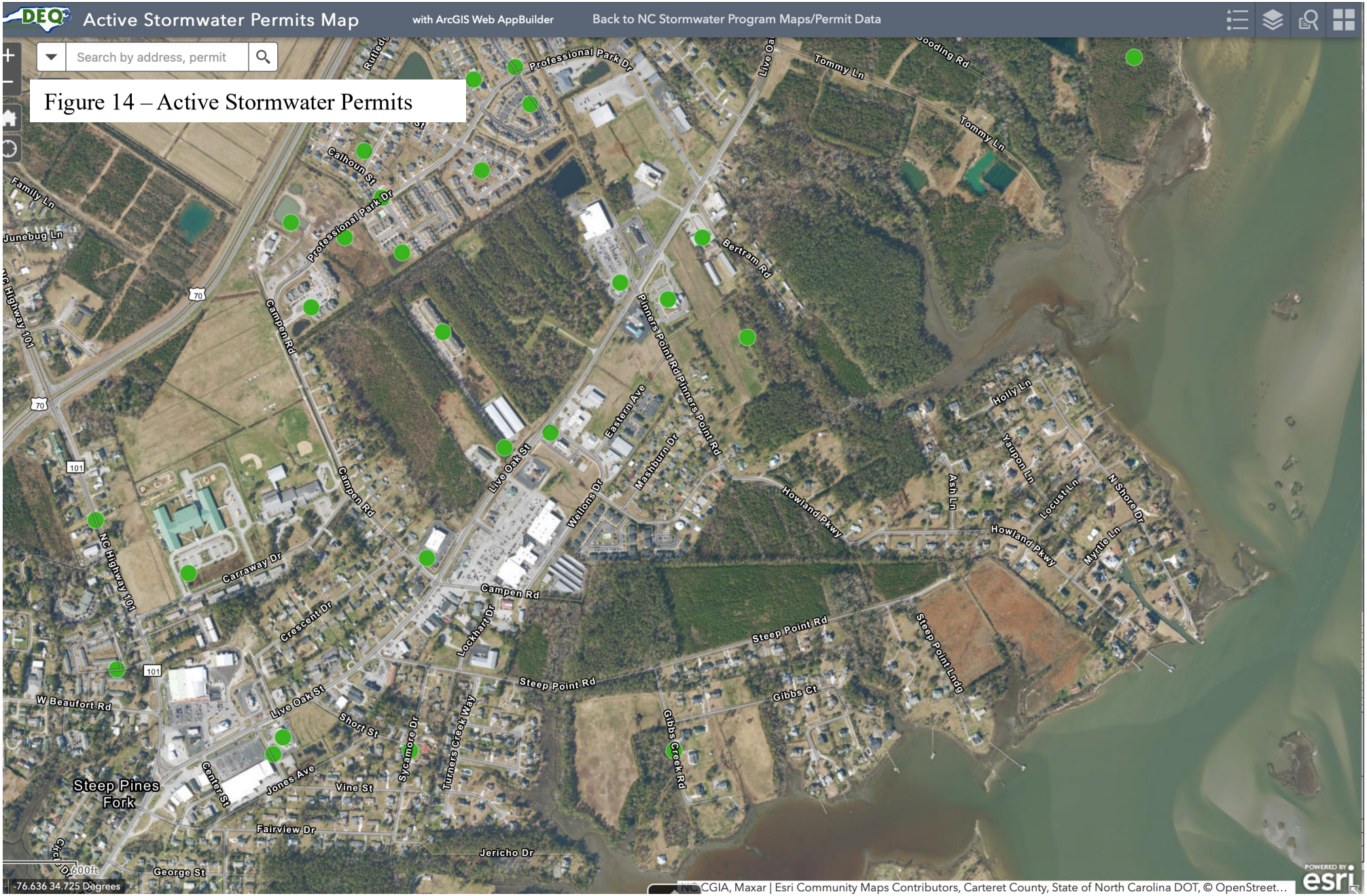


Figure 14 – Active Stormwater Permits

N

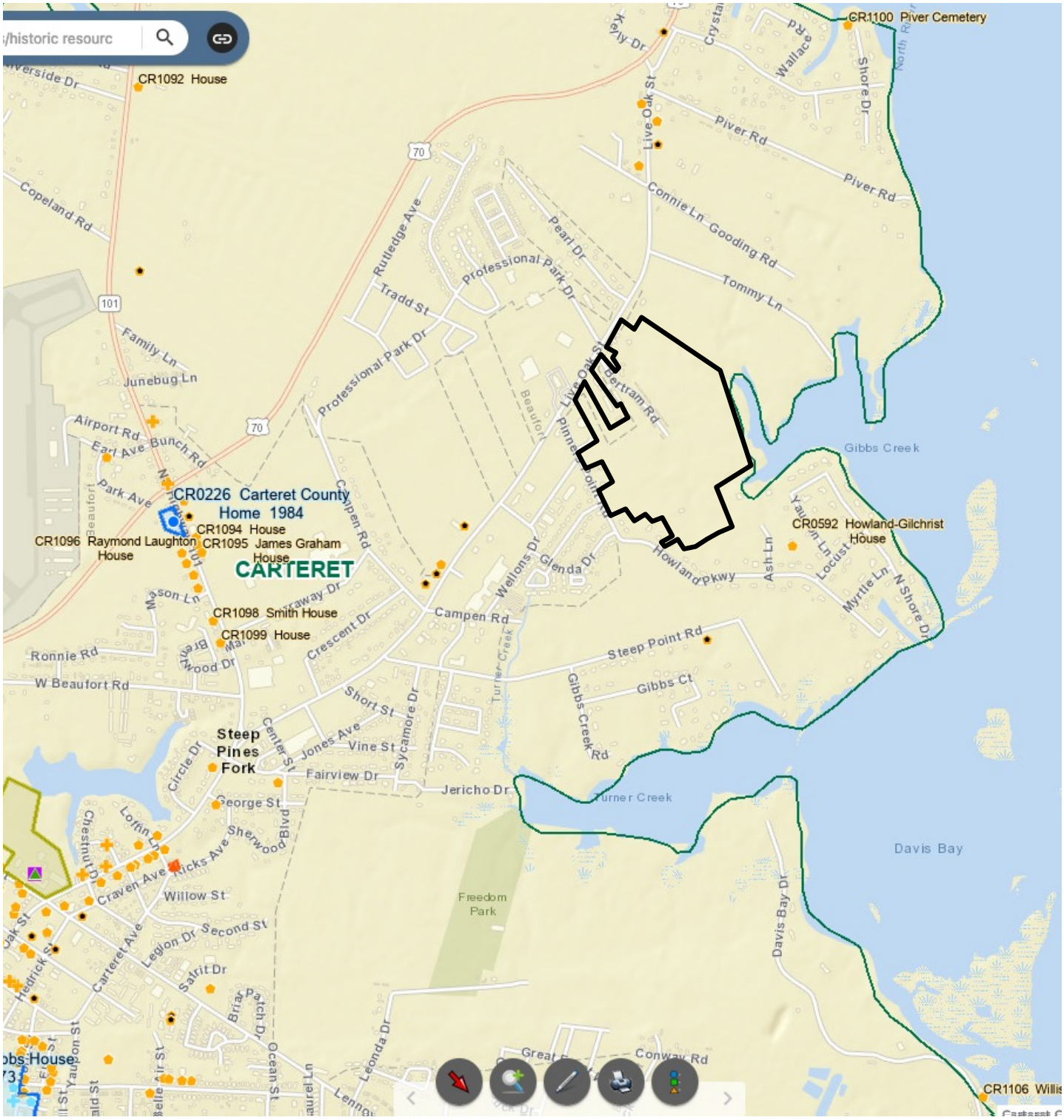


FIGURE 15: HISTORIC PRESERVATION

Source: NPS Maps ArcGIS

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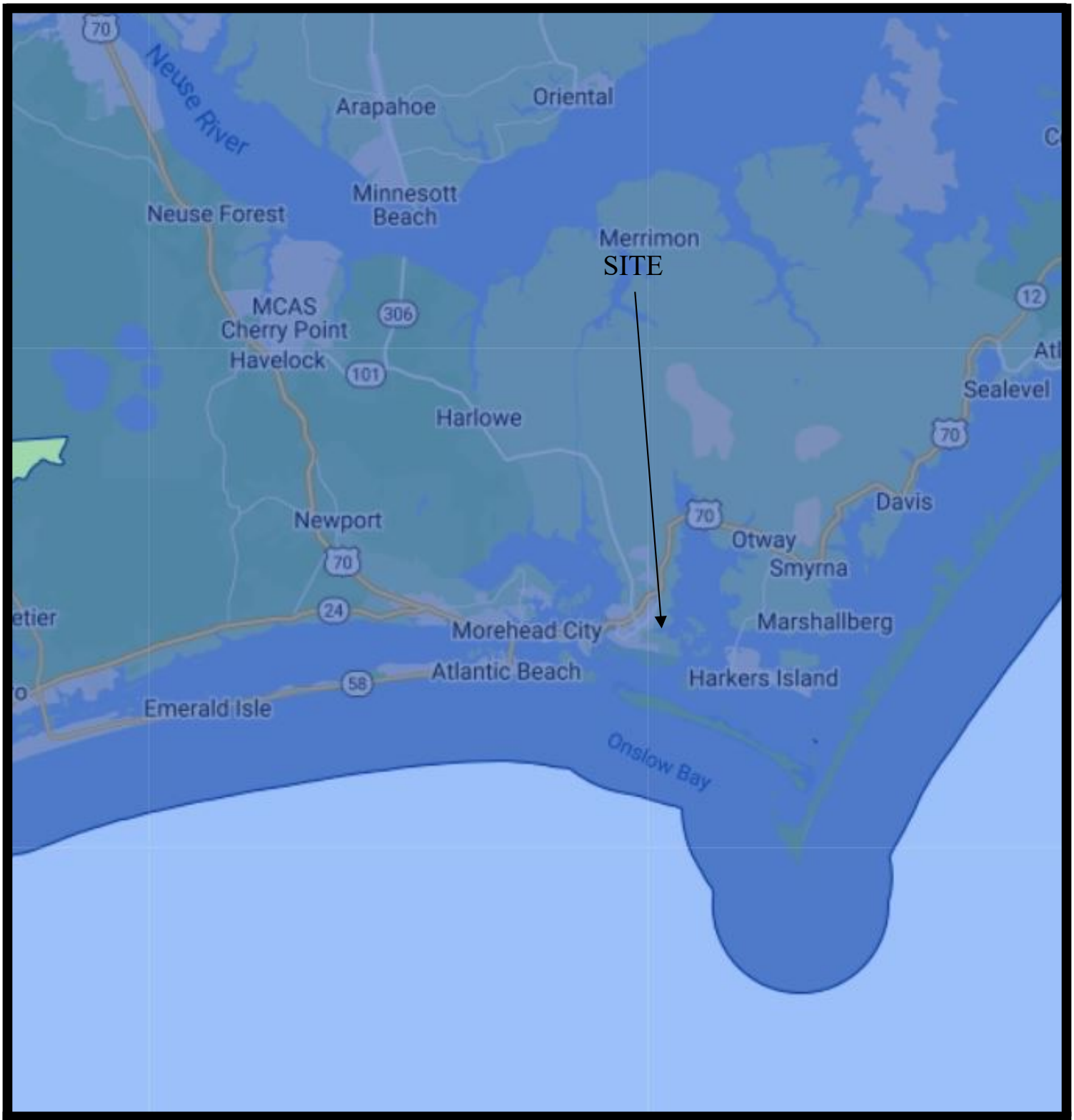
April 2022



Not to Scale **FIGURE 16: COASTAL ZONE MANAGEMENT**

Source: US National Oceanic and Atmospheric Administration

N

Salt Wind Preserve
Beaufort, North Carolina

Atlantic Shores
ASE
Environmental Services, Ltd.

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April 2022

Not to Scale

FIGURE 17: COASTAL BARRIER RESOURCES

Source: NPS Maps ArcGIS

N

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Beaufort, North Carolina

Atlantic Shores
ASE
Environmental Services, Ltd.

ASE Project No. 1555
April 2022

Appendix II
Soils

United States Department of Agriculture

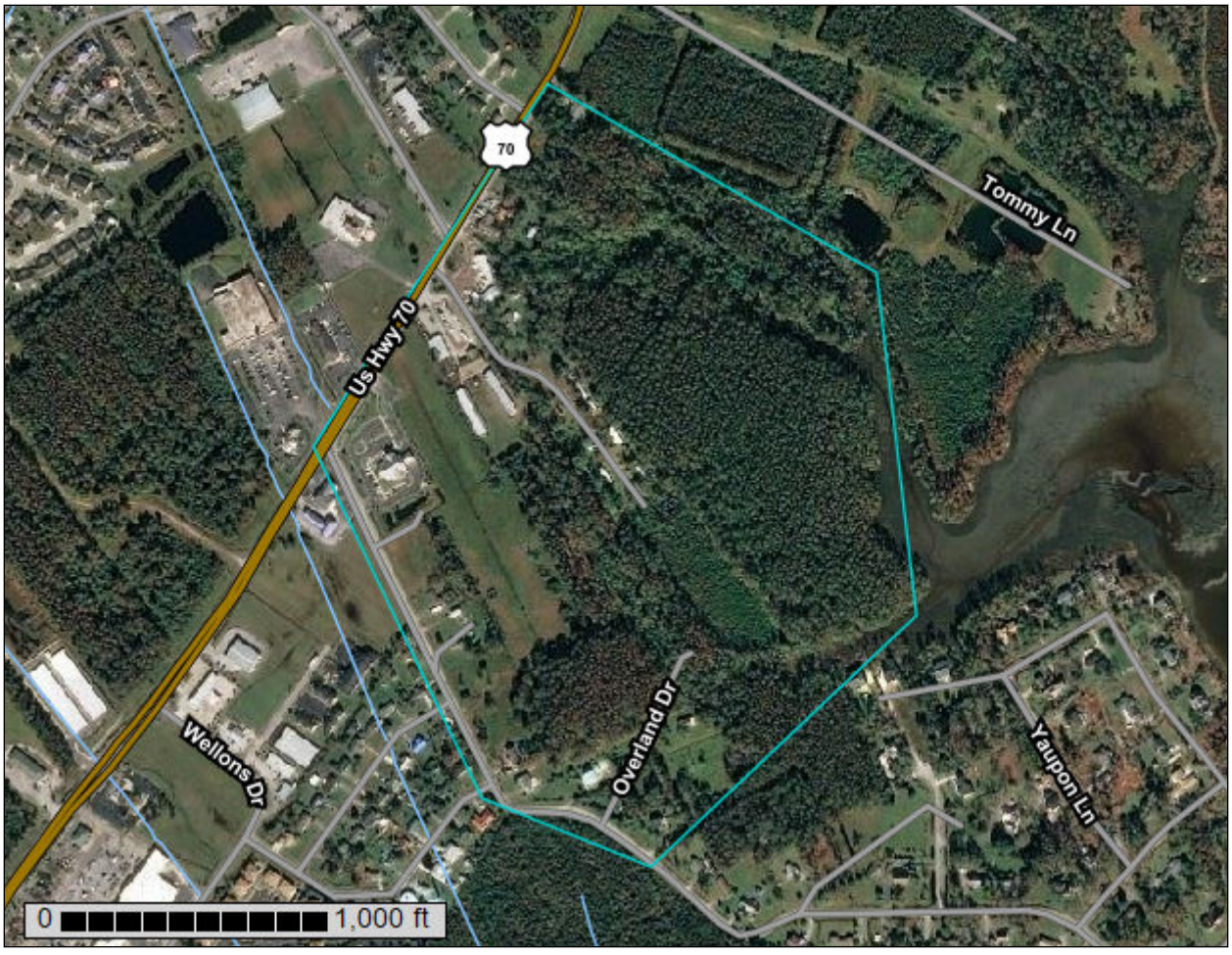
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Carteret County, North Carolina

Beaufort



April 28, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Soil Map.....9
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Map Unit Descriptions.....11
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Ag—Augusta loamy fine sand.....14
StA—State loamy fine sand, 0 to 2 percent slopes.....15
Tm—Tomotley fine sandy loam.....16
W—Water.....18
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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

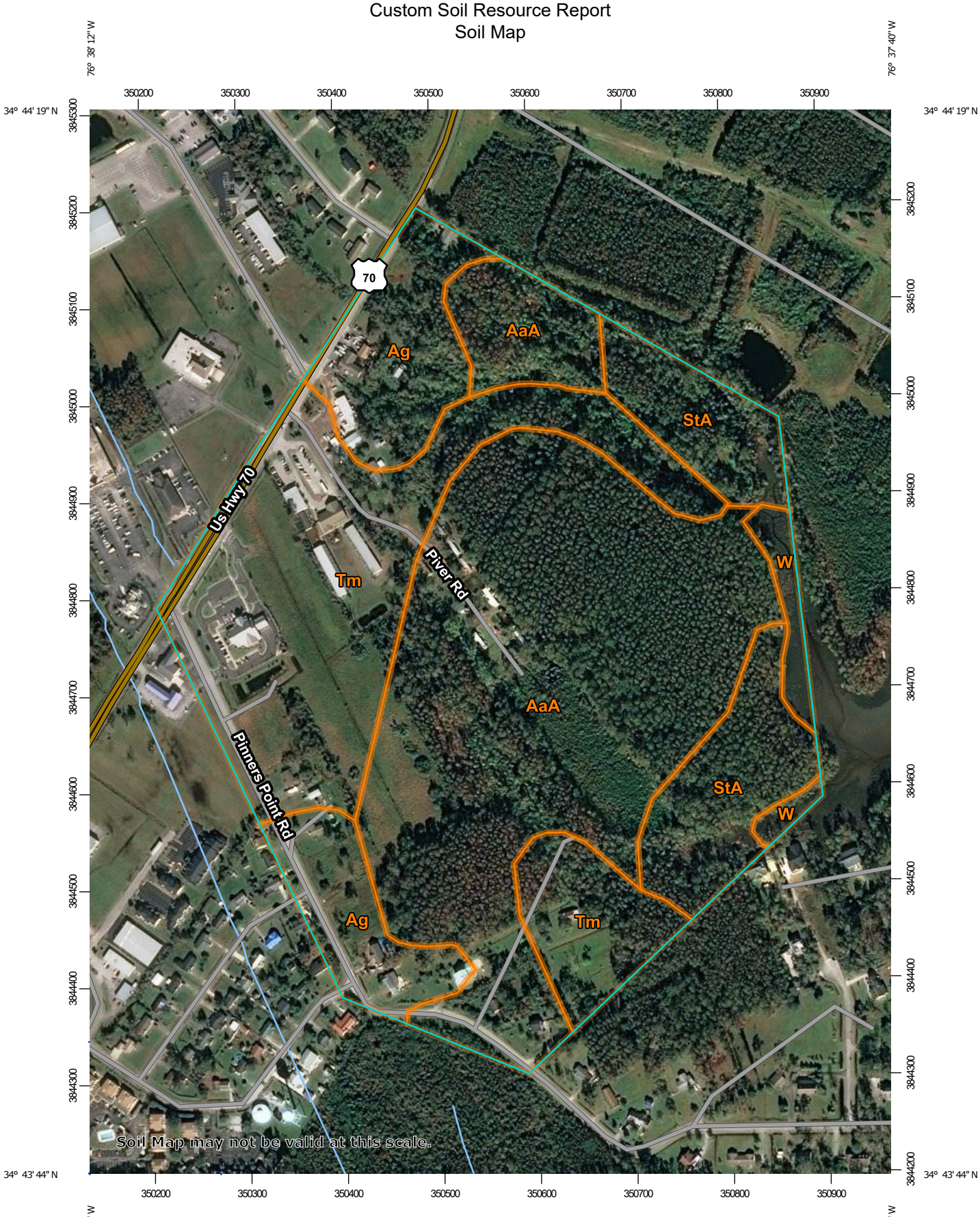
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:5,350 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Carteret County, North Carolina
Survey Area Data: Version 25, Jan 21, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 16, 2018—Nov 22, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AaA	Altavista loamy fine sand, 0 to 2 percent slopes	44.4	45.1%
Ag	Augusta loamy fine sand	12.1	12.3%
StA	State loamy fine sand, 0 to 2 percent slopes	11.4	11.6%
Tm	Tomotley fine sandy loam	28.5	28.9%
W	Water	2.0	2.0%
Totals for Area of Interest		**98.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate

pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Carteret County, North Carolina

AaA—Altavista loamy fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 3w7y
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Altavista and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Altavista

Setting

Landform: Marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

Ap - 0 to 5 inches: loamy fine sand
E - 5 to 8 inches: loamy fine sand
Bt - 8 to 40 inches: sandy clay loam
BC - 40 to 57 inches: sandy loam
Cg - 57 to 80 inches: coarse sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Ag—Augusta loamy fine sand

Map Unit Setting

National map unit symbol: 3w7z
Elevation: 0 to 30 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Augusta, drained, and similar soils: 80 percent
Augusta, undrained, and similar soils: 10 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Augusta, Drained

Setting

Landform: Depressions on marine terraces, flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

Ap - 0 to 5 inches: fine sandy loam
Bt - 5 to 23 inches: loam
BCg - 23 to 31 inches: sandy loam
Cg - 31 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Hydric soil rating: No

Description of Augusta, Undrained

Setting

Landform: Depressions on marine terraces, flats on marine terraces

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

A - 0 to 5 inches: fine sandy loam
Bt - 5 to 23 inches: loam
BCg - 23 to 31 inches: sandy loam
Cg - 31 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Hydric soil rating: No

Minor Components

Tetotum

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Tomotley, undrained

Percent of map unit: 5 percent
Landform: Flats on marine terraces, depressions on stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

StA—State loamy fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 3w9r
Elevation: 0 to 20 feet

Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition
State and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of State

Setting
Landform: Ridges on marine terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile
Ap - 0 to 7 inches: loamy fine sand
E - 7 to 13 inches: loamy fine sand
Bt1 - 13 to 38 inches: sandy clay loam
Bt2 - 38 to 42 inches: fine sandy loam
C - 42 to 80 inches: sand

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.9 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Tm—Tomotley fine sandy loam

Map Unit Setting
National map unit symbol: 3w9s
Elevation: 0 to 30 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Tomotley, drained, and similar soils: 75 percent
Tomotley, undrained, and similar soils: 10 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tomotley, Drained

Setting

Landform: Depressions on stream terraces, flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Btg1 - 7 to 12 inches: fine sandy loam
Btg2 - 12 to 42 inches: sandy clay loam
BCg - 42 to 50 inches: sandy loam
Cg - 50 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Tomotley, Undrained

Setting

Landform: Flats on marine terraces, depressions on stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

A - 0 to 7 inches: fine sandy loam
Btg1 - 7 to 12 inches: fine sandy loam
Btg2 - 12 to 42 inches: sandy clay loam
BCg - 42 to 50 inches: sandy loam
Cg - 50 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Arapahoe, undrained

Percent of map unit: 3 percent
Landform: Depressions, flats
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Nimmo, undrained

Percent of map unit: 3 percent
Landform: Flats on marine terraces, depressions on marine terraces
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

Dragston, undrained

Percent of map unit: 1 percent
Landform: Marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

W—Water

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydric soil rating: No

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LMG
LAND MANAGEMENT GROUP
a DAVEY company

Per NCDEH guidance:
Applicant's or Owner's Statement, and Licensed Soil Scientist's Statement

Signed and Dated Statement From the Applicant (owner or owner's legal representative).

"The Licensed Soil Scientist (LSS) Evaluation to this application is to be used to produce design and construction features for permitting in accordance with NC Session Law SL 2018-114 Section 11.(c)."

"This LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11.(c)."

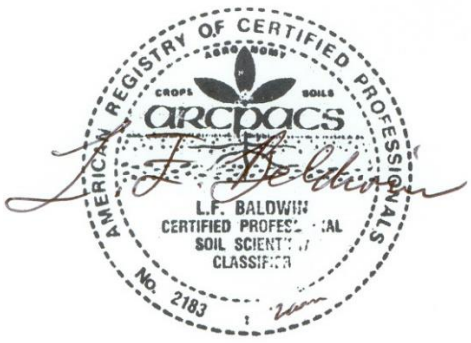
This application includes all information described in 15A NCAC 18A .1937 (d).

Larry F. Baldwin, NCLSS #1040; ARCPACS #2813
Print name of owner or owner's legal representative

Larry F. Baldwin, CPSS/SC

Signature of owner or owner's legal representative

Date: January 29, 2022
See attached signed authorization by owner



LMG
LAND MANAGEMENT GROUP
a DAVEY company

DATE: January 29, 2022

SUBJECT: Land and soils evaluation of proposed Lot #52 Shackleford Landing (~0.6 acre total) for on-site waste treatment usability and NCDPH permitting through Session Law 2018-114 Section 11(c). Tract located NE of Town of Beaufort and Pinners Point Road, Carteret County, North Carolina. Portion of PIN#: 731609153648000

TO:

Ms. Beth Clifford
Beltway Investment Group, Inc.
10 State Road, #289
Bath, ME 04530
(207) 449-8801
beth@beltwayig.com

Environmental Health Section
Carteret County Health Dept
3820 Bridges Street, Suite-A
Morehead City, NC 28557
(252) 728-8499

"The Licensed Soil Scientist (LSS) Evaluation is being submitted pursuant to and meets the requirements of Session Law 2018-114 Section 11.(c)."
This report, data, forms, and maps are to be submitted by the owner as part of their application for a subsurface on-site waste treatment system "Improvements Permit" to be reviewed, processed, and issued by the NC Division of Public Health – Carteret County Health Dept.

A land & soils evaluation was completed of proposed Lot #52 Shackleford Landing (~0.6 acre total) for on-site waste treatment usability, system design layout, and NC Division of Public Health (NCDPH) permitting through NC Session Law 2018-114 11.(c). This application includes all information necessary and described in 15A NCAC 18A .1937 (d). The current rules and regulations of NCDEH NCAC 15A-18A-.1900 were used as guidelines to determine site suitability for subsurface on-site waste treatment systems. An on-site, subsurface waste treatment system design layout is part of this evaluation for NCDPH permitting by NCSL 2018-114 Section 11.(c). The tract was evaluated by traverses across the tract, qualitative soil evaluations, soil descriptions, general topography, property line locations, existing or previous known facilities, aerial photo interpretation, and review of historically existing information.

The tract is located within lower Atlantic coastal plain sediments and geomorphology. Topography across the property is nearly level (0 - <3% slope). General ground elevations are ~5 - 10 ft (amsl; see USGS map). This property has no known evidence of previous development, and has been historically wooded. Plans are to develop this lot and the surrounding property into a residential subdivision (see plan). The owner plans to build a 3 bedroom residential home on the lot with a wastewater design flow rate of 360 gal/day. The property is served by potable water from the Town of Beaufort water system.

The enclosed land & soils map shows the various land & soil classifications, soil boring locations, and their approximate locations. Representative soil boring descriptions within usable soil areas are attached. The following is a brief description of each land / soil classification found within the property and their possible limitations or potential for usage:

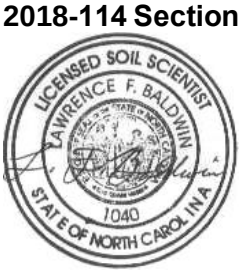
The **"Brown" Areas** (see map & soil boring descriptions) appear to be uplands that are somewhat poorly drained with an estimated seasonal high water table between 15 - 23 inches from the present surface, pending location and based upon soil wetness indicators. Estimated permeability is 30 - 60 min/in (1 - 2 in/hr) to ~18 inch depths and 60 – 120 min/in (0.5 – 1.0 in/hr) below 18 inch depths, based upon soil texture and structure. Soil textures are estimated to be sandy loam to sandy clay loam to ~18 inch depths, and sandy clay loam to clay loam textures below 18 inch depths. Soil types found are similar to the Augusta and Altavista-wet phase soil series. These soil areas have potential for alternative on-site waste treatment systems with fill site improvements. This usable soil area is limited in size and space, thus alternative pretreatment systems will be utilized.

The **"Pink" Areas** (see map) appear to be poorly to somewhat poorly drained uplands that are considered as unsuitable for on-site waste treatment usage due to shallow seasonal high water table (<12 in), slow or restrictive horizons, high organic surface, poor landscape position, and/or poor soil structure. Unless further quantitative on-site testing proves otherwise positive, these soil areas should be considered as unusable for on-site waste treatment usage by NCDEH standards. Soil types found are Augusta-wet phase and Tomotley soil series.

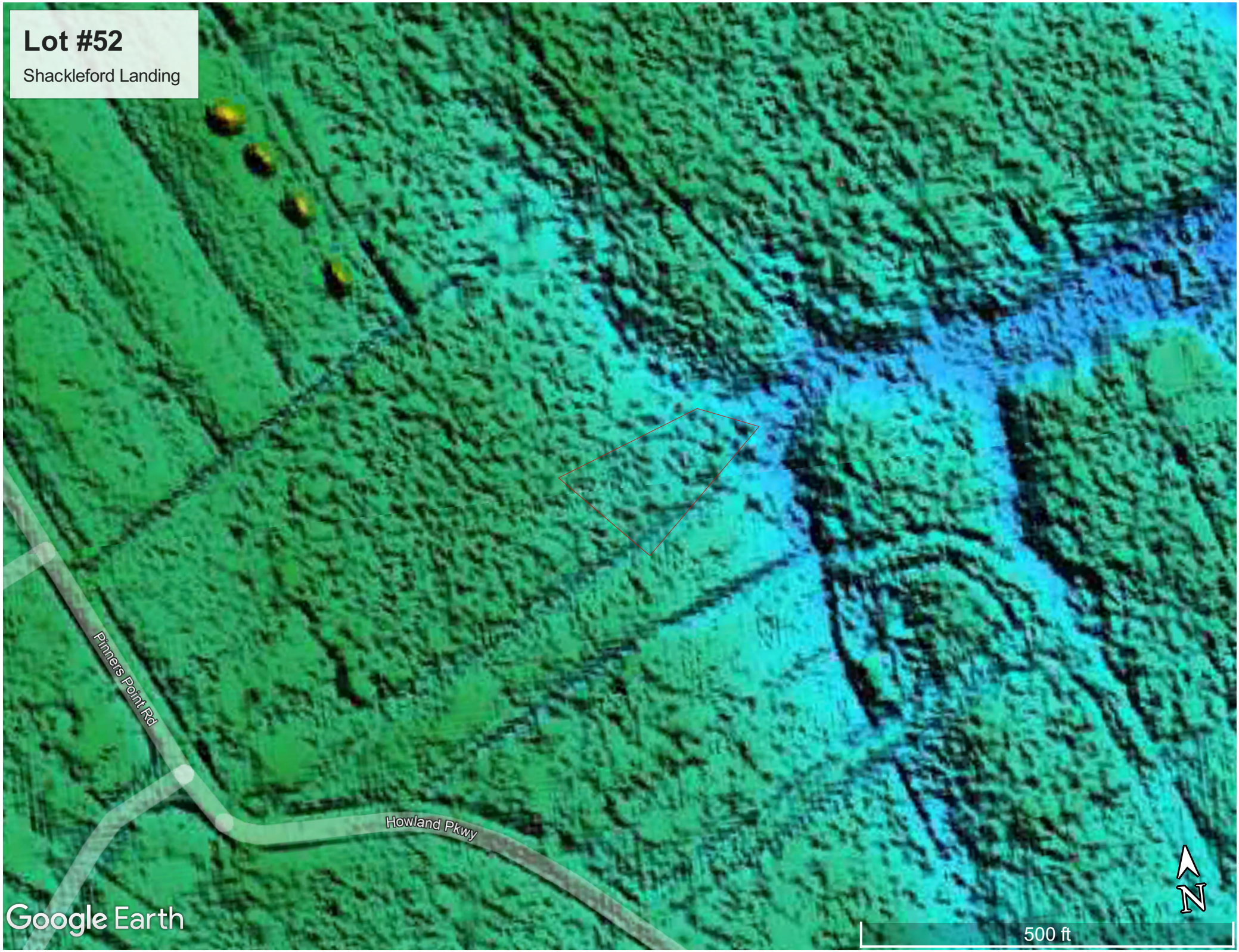
The **"Gray" Areas** (see map) are jurisdictional 404 wetlands as determined by others. These areas cannot be filled or massively disturbed without Federal & State permits, and are also unsuitable for on-site waste treatment usage.

Based upon this land & soils evaluation, the property shows potential for on-site waste treatment usage within a limited soil area ("Brown" area on map). As part of the NC SL 2018-114 Section 11.(c) NCDPH permitting process, the attached land & soils map shows an on-site pretreatment waste treatment layout with site improvements and waste treatment system specifications that will meet or exceed NCDEH standards for a 3 bedroom (360 gal/day) residential home. The general design specifications and site improvements for the waste treatment system are given on the design layout scaled drawings at 1 inch = 60 feet (see maps). The waste treatment system consists of gravity flow from the home to a NCDEH approved 1000 gal septic tank, then gravity flow to a NCDEH approved (IWWS 2004-3-R4) AdvanTex TS-1 AX-20 pretreatment module which then gravity flows to a NCDEH approved 900 gal pump tank. The pump tank doses 6 times/day (60 gal/dose) to a shallow fill mound low pressure pipe (LPP) system per NCDEH Rule .1957. The LPP system area requires site improvements of removing surface vegetative / soil materials to a 0.5 ft depth and then fill with clean loamy sand / sand materials to 1.0 ft above surrounding ground surface elevation within a 33 ft x 78 ft area. The actual LPP system is centered on the fill improved area with 3 LPP laterals spaced on 5 ft centers and each 60 ft long. An equal repair is provided as required in the dimensions of 38 ft W x 63 ft L (see map). The corners of the initial site improved area (33 ft x 78 ft) have been located and pin-flagged in the field. The front property corner locations have also been identified and marked.

This is a land and soils evaluation for on-site, subsurface waste treatment NCDPH permitting. **"The LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11.(c)."** Please contact this authorized agent for clarifications or amendments.



Larry F. Baldwin, CPSS #2183 / NCLSS #1040


Lot #52
Shackleford Landing
Pinners Point Rd
Howland Pkwy
Google Earth
N
500 ft

LAND & SOILS MAP OF PROPOSED LOT #52 SHACKLEFORD LANDING SUBDIVISION (~0.6 acre)
FOR POTENTIAL ON-SITE WASTE TREATMENT USABILITY
Beaufort NE Area - Carteret County - North Carolina

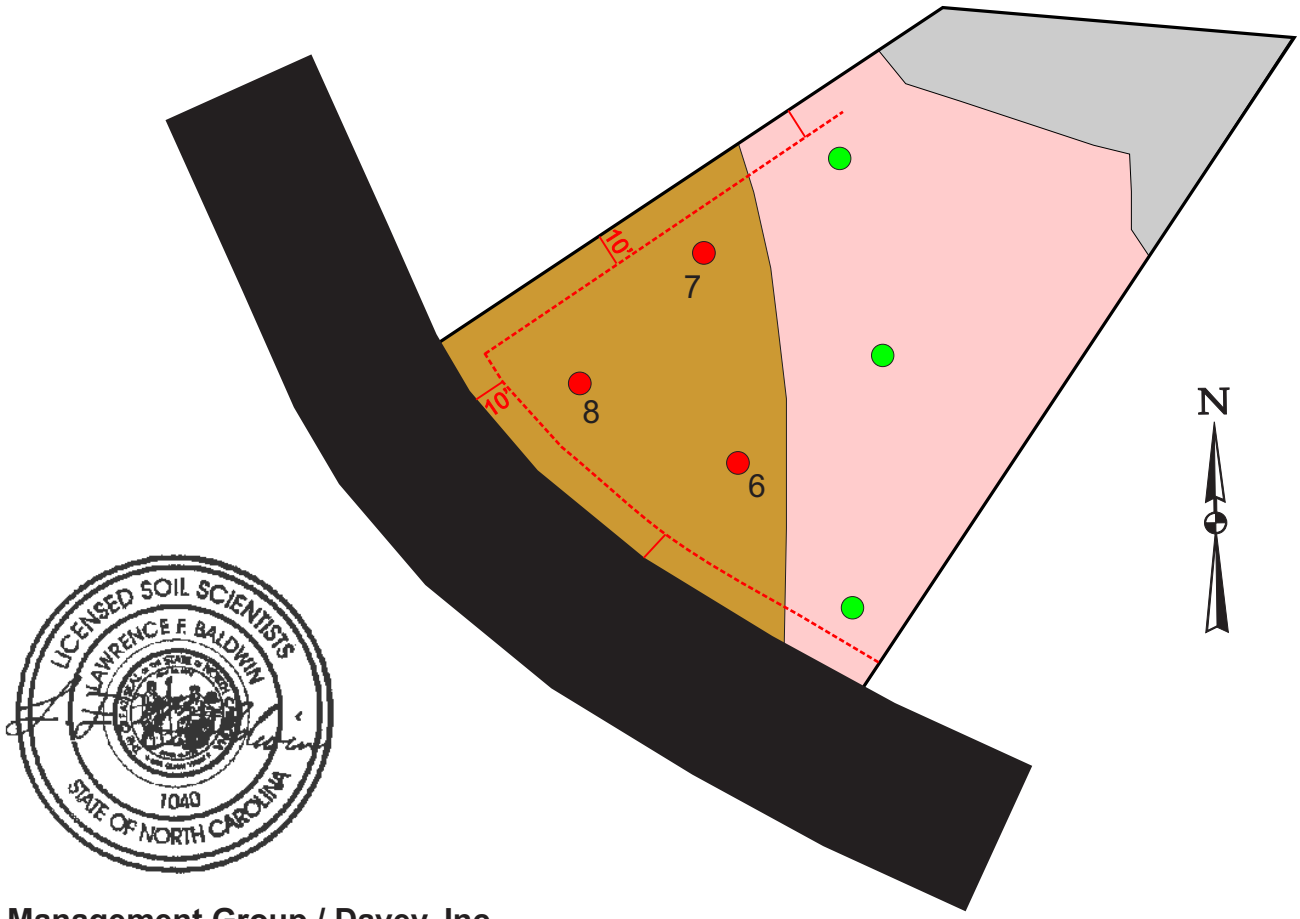
"The LSS Evaluation is being submitted pursuant to and meets the requirements of NCSL 2018-114 section 11.(c)."

This is a qualitative soils evaluation for preliminary planning purposes. Any permit approvals may require additional soil & site evaluations, and/or regulatory concurrences with these findings. This is not an accurate survey

SCALE: 1 Inch = 60 Feet
(Not a survey; All lines paced & approximate)
JANUARY - 2022

Lot-52 of proposed
Shackleford Landing S/D Nov-2021

PIN # 731609153648000 portion



Land Management Group / Davey, Inc.

Provisionally suitable soils for on-site waste treatment with fill site improvements and usage of alternative on-site waste treatment systems. Estimated seasonal high water table 15 - 23 inches. Estimate permeability 30 - 60 min/in (1 - 2 in/hr) to ~18 inch depths and 60 - 120 min/in (0.5 - 1 in/hr) below +18 inch depths. Soil types similar to Augusta or Altavista-wet phase soil series.

Soils unsuitable or not recommended for on-site waste treatment usage due to shallow seasonal high water table indicators <12" bpgs, shallow slow permeability <24" bpgs, poor landscape position, restrictive permeability <24" bpgs, or poor soil structure unless further on-site testing proves positive and otherwise. Soil types similar to the Augusta-wet phase or Tomotley soil series.

Potential 404 wetland areas as determined by others.

Soil description and evaluation borings.

General soil evaluation borings.

LAND & SOILS MAP OF PROPOSED LOT #52 SHACKLEFORD LANDING SUBDIVISION (~0.6 acre)
FOR POTENTIAL ON-SITE WASTE TREATMENT USABILITY
Beaufort NE Area - Carteret County - North Carolina

"The LSS Evaluation is being submitted pursuant to and meets the requirements of NCSL 2018-114 section 11.(c)."

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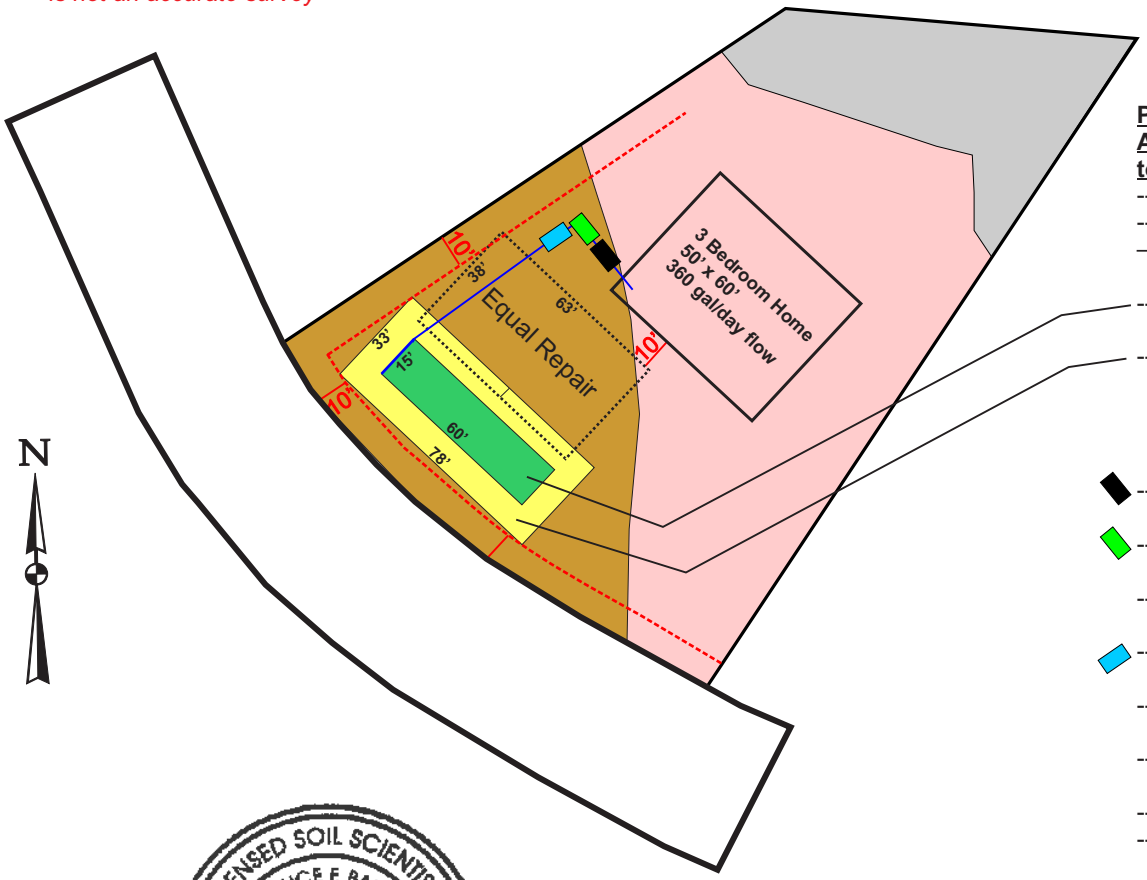
SCALE: 1 Inch = 60 Feet
(Not a survey; All lines paced & approximate)
JANUARY - 2022



Proposed On-site Waste Treatment System
AdvanTex TS-1 AX-20 Pretreatment NCDEH IWWS 2004-3-R4
to a Shallow 1 ft Fill Mound Low Pressure Pipe System:

---3 Bedroom residential home.
---360 gal/day design rate.
—LTAR 0.40 gal/day/sqft (0.20 gal/day/sqft x 2 TS-1 pretreatment) no other reductions taken.
---900 sqft low pressure pipe area drainfield area 15' W x 60' L 3 LPP laterals each 60' L spaced on 5' centers.
---LPP drainfield bottom placed at present ground surface elevation after site improvements of removing 0.5 ft vegetative surface with back fill of clean loamy sand materials to 1 ft above adjacent present ground surface elevation in area of 33 ft W x 78 ft L.
---Gravity flow of wastewater from home to septic tank to 1000 gal approved NCDEH septic tank.
---Gravity flow of wastewater effluent from septic tank to NCDEH approved AdvanTex TS-1 AX-20 pretreatment module.
---Pretreated effluent from AdvanTex module flows to NCDEH approved 900 gal pump tank.
---Pump tank equally doses to shallow fill mound LPP drainfield system on 6 timed intervals of 60 gal/dose.
---NCDEH & Advantex approved control module panel regulates system operation.
---Equal repair area reserved for same system type within a 38' W x 63' L LPP system area.
---Waste treatment system area and property corners marked in field.
---NCDEH or Carteret County Health Dept may require a NC Licensed Engineer to provide final design for this system.
---Potable water supply by Town of Beaufort, NC.

Land Management Group / Davey, Inc.

Carteret County, N.C.

December 20, 2021

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DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

PROPERTY ID #: **638709153529000**
COUNTY: **Carteret**

SOIL/SITE EVALUATION
***for* ON-SITE WASTEWATER SYSTEM**
(Complete all fields in full)

OWNER: **Beth Clifford, Beltway Investment Group Inc.** APPLICATION DATE: **Jan 29, 2022**
ADDRESS: **10 State Road, #289, Bath, ME 04530** DATE EVALUATED: **Jan 12, 2022**
PROPOSED FACILITY: **Residential 3 bedroom Home** PROPOSED DESIGN FLOW (.1949): 3**60 gal/day** PROPERTY SIZE: **~0.6 acre**
LOCATION OF SITE: **proposed Lot #52 Shackleford Landing, Beaufort NC 28516** PROPERTY RECORDED: **part PIN#731609153648000**
WATER SUPPLY: ☐ Private **X** Public ☐ Well ☐ Spring ☐ Other _____
EVALUATION METHOD: **X** Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: **X** Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
6	L 1%	A 00 - 04	GR / LS	VFR / SEXP	10YR 4/1	S	S	S	S 0.20 gal/day/sqft LPP
		B 04 – 18	GR / SL	FR / SEXP	10YR 6/4				
		Btg 18 – 28	SBK / SCL	FI / SEXP	10YR 6/6 6/2				
		BC 28 – 45	SBK / SCL-CL	FI / SEXP	10YR 6\2 6/6				
7	L 1%	A 00 - 05	GR / LS	VFR / SEXP	10YR 4/1	S	S	S	S 0.20 gal/day/sqft LPP
		B 05 – 15	GR / SL	FR / SEXP	10YR 6/6				
		Btg 15 – 30	SBK / SCL	FI / SEXP	10YR 5/6 4/2				
		BC 30 - 45	SBK / SCL-CL	FI / SEXP	10YR 6/2 5/4				
8	L 2%	A 00 – 04	GR / LS	VFR / SEXP	10YR 4/2	S	S	S	S 0.20 gal/day/sqft LPP
		B 04– 23	SBK / SL	FR / SEXP	10YR 5/6				
		Btg1 23 – 35	SBK / SCL	FI / SEXP	10YR 6/6 4/2				
		Btg2 35 – 46	SBK / SCL	FI / SEXP	10YR 6/2 5/8				
X									

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	**+2600 sqft**	**+2400 sqft**
System Type(s)	**AdvanTex TS-1 to Shallow Fill LPP**	**AdvanTex TS-1 to Shallow Fill LPP**

OTHER FACTORS (.1946): **N/A**
SITE CLASSIFICATION (.1948): **Suitable / Provisionally Suitable**

EVALUATED BY: **Larry F. Baldwin NCLSS #1040; ARCPACS #2183**
OTHER(S) PRESENT: _____

Site LTAR	**0.50 gal/day/sqft**	**N/A**

COMMENTS: **Puraflo-A bed rock drainfield bottoms at +1 inches from present ground surface after specified fill site improvements and fill finish.**

LEGEND

use the following standard abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope)	I	S (Sand)	1.2 - 0.8	0.6 - 0.4	SEXP (Slightly Expansive)	G (Single Grain)
CV (Convex Slope)		LS (Loamy Sand)			EXP (Expansive)	M (Massive)
D (Drainage Way)						CR (Crumb)
DS (Debris Slump)	II	SL (Sandy Loam)	0.8 - 0.6	0.4 - 0.3		GR (Granular)
FP (Flood Plain)		L (Loam)				SBK (Subangular Blocky)
FS (Foot Slope)						ABK (Angular Blocky)
H (Head Slope)	III	Si (Silt)	0.6 - 0.3	0.3 - 0.15		PL (Platy)
L (Linear Slope)		SiCL (Silty Clay Loam)				PR (Prismatic)
N (Nose Slope)		CL (Clay Loam)				
R (Ridge)		SCL (Sandy Clay Loam)			**MOIST**	**WET**
S (Shoulder Slope)		SiL (Silt Loam)				
T (Terrace)					VFR (Very Friable)	NS (Non-sticky)
	IV	SC (Sandy Clay)	0.4 - 0.1	0.2 - 0.05	FR (Friable)	SS (Slightly Sticky)
		SiC (Silty Clay)			FI (Firm)	S (Sticky)
		C (Clay)			VFI (Very Firm v. Very Sticky)	VS (Very Sticky)
		O (Organic)	None	None	EFI (Extremely Firm)	NP (Non-plastic) SP (Slightly Plastic)
						P (Plastic)
						VP (Very Plastic)

*Adjust LTAR due to depth, consistence, structure, soil wetness, landscape, position, wastewater flow and quality.

NOTES

HORIZON DEPTH In inches below natural soil surface

DEPTH OF FILL In inches from land surface

RESTRICTIVE HORIZON Thickness and depth from land surface

SAPROLITE S(suitable) or U(unsuitable)

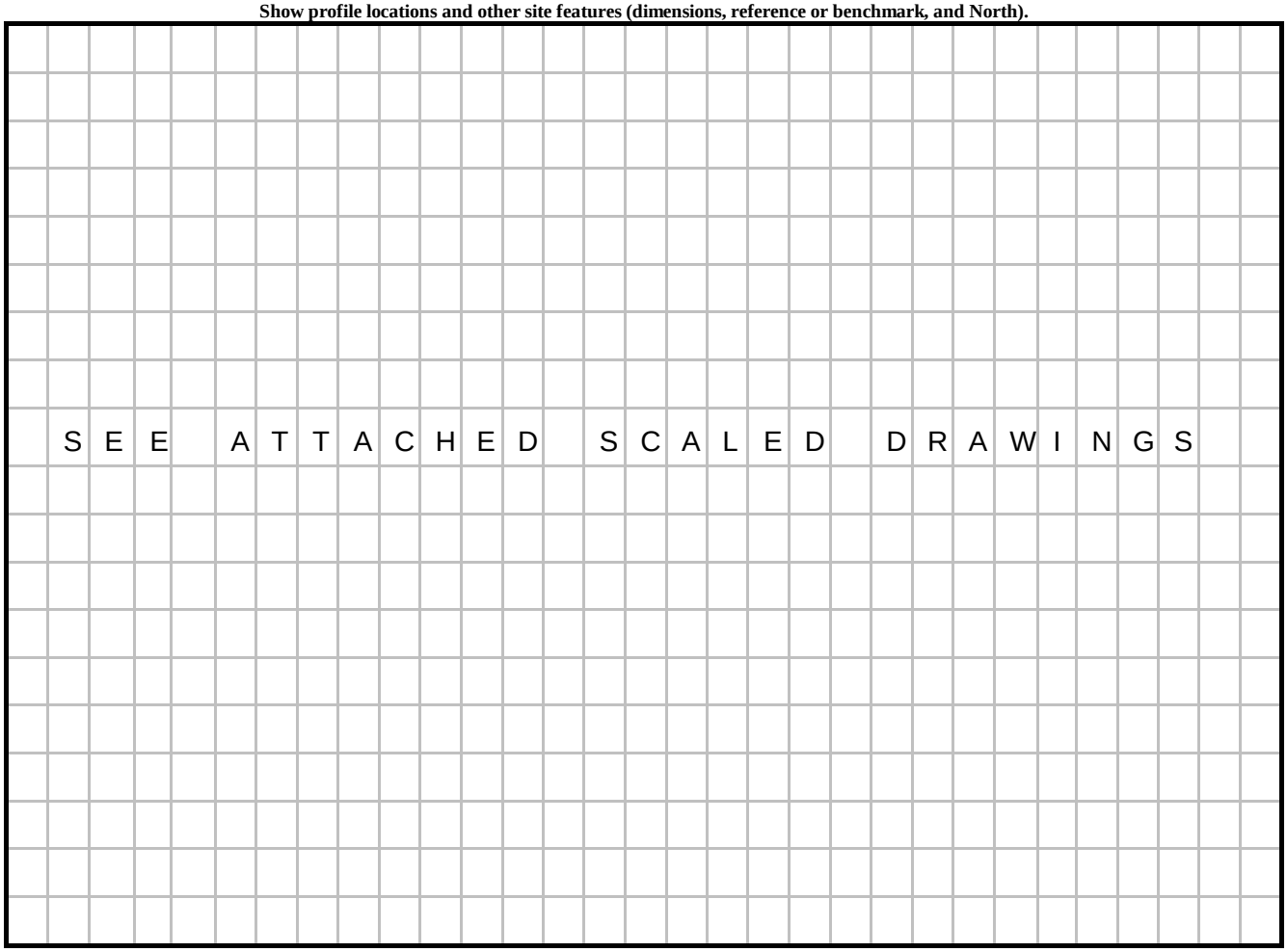
SOIL WETNESS Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation

CLASSIFICATION S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)

Evaluation of saprolite shall be by pits.

Long-term Acceptance Rate (LTAR): gal/day/ft^2

Show profile locations and other site features (dimensions, reference or benchmark, and North).



Appendix III

CAMA, and Preliminary Wetland Review Report

№ 01054

N.C. DIVISION OF COASTAL MANAGEMENT
NOTIFICATION OF COASTAL WETLAND DETERMINATION

Pursuant to NCGS 113-229(n)(3), and 15A NCAC 07H.0205(a) A B C D

Property Owner: Bettuney Inv. Group Mailing Address: ______
Site Address: Adj to 231 Pinners Pt Road Beaufort

Project Location: County Carteret US/NC/SR # ______
River Basin White Adj. Water Body Gibbs Creek

Indicate Which of the Following Apply:

______ Coastal Wetlands have been identified on the above described property. The project (as currently proposed) may impact these wetlands but no official delineation was performed. The Division of Coastal Management suggests that you request a formal delineation by this Division to evaluate potential impacts to Coastal Wetlands and project design alternatives.

X Coastal Wetlands have been identified on the above described property. At your request, an official Coastal Wetland delineation was performed by the Division of Coastal Management. The Division of Coastal Management suggests that you have the delineation surveyed. The Division will verify the surveyed line, which will then remain valid for a period not to exceed 12 months from the delineation.
As well as NHW Contour

Coastal Wetlands species identified on-site:

- ✓ Spartina alterniflora
- ✓ Juncus roemerianus
- ____ Salicornia spp.
- ____ Distichlis spp.
- ____ Limonium spp.
- ____ Scirpus spp.
- ____ Cladium jamaicense
- ____ Typha spp.
- ____ Spartina patens
- ____ Spartina cynosuroides

Check any field indicators that apply to establish regular or occasional flooding:

- ____ tidal water observed on-site (do not check if during or following Tropical Storm/Hurricane)
- ____ crabs/holes
- ✓ wrack lines
- ____ staining
- ✓ tidal water connection
- ____ periwinkle
- ✓ elevation changes
- ____ other (please describe) ______

DCM Official Heather Styron Title Field Specialist
Date 4/5/2022

In the event you wish to appeal this jurisdictional call, you may request a second opinion by contacting my supervisor, Jonathan Howell Acting DM (DCM District Manager) at DCM Morehead City.

Visit our website at www.nccoastalmanagement.com

Preliminary ORM Data Entry Fields for New Actions

ACTION ID #: SAW- Begin Date (Date Received):

Prepare file folder ☐ Assign Action ID Number in ORM ☐

1. Project Name [PCN Form A2a]: Beltway-Stroud Tract
2. Work Type: ☑ Private ☐ Institutional ☐ Government ☐ Commercial
3. Project Description / Purpose [PCN Form B3d and B3e]:

Preliminary Jurisdictional Determination Request

4. Property Owner / Applicant [PCN Form A3 or A4]: Bertram Rental Properties LLC, Bertie Eubanks Neel
5. Agent / Consultant [PNC Form A5 – or ORM Consultant ID Number]:

Paul Farley - DRG

6. Related Action ID Number(s) [PCN Form B5b]:
7. Project Location – Coordinates, Street Address, and/or Location Description [PCN Form B1b]:

East Side of US Hwy 70 Bus, Beaufort, NC
34.733749, -76.631705

8. Project Location – Tax Parcel ID [PCN Form B1a]: 731609066438000, 731609153648000, 7316091615
9. Project Location – County [PCN Form A2b]: Carteret
10. Project Location – Nearest Municipality or Town [PCN Form A2c]: Beaufort
11. Project Information – Nearest Waterbody [PCN Form B2a]: Gibbs Creek
12. Watershed / 8-Digit Hydrologic Unit Code [PCN Form B2c]: 03020301

Authorization: Section 10 ☐ Section 404 ☐ Section 10 and 404 ☑

Regulatory Action Type:

- ☐ Standard Permit
- ☐ Nationwide Permit #
- ☐ Regional General Permit #
- ☑ Jurisdictional Determination Request
- ☐ Pre-Application Request
- ☐ Unauthorized Activity
- ☐ Compliance
- ☐ No Permit Required

Revised 20150602

April 4, 2022

TO: Tom Charles
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403

RE: Beltway-Stroud Tract
East Side of US Hwy 70 Bus, Beaufort, NC
Preliminary Jurisdictional Determination Request

Tom,

I have enclosed a PJD Request Package for the Beltway-Stroud Tract located in Carteret County, Beaufort. The review area consists of Parcel IDs: 731609066438000, 731609153648000, 731609161556000, and 731609167703000 and is approximately 85 acres.

This data package is for your use in preparation for a site review of flagged wetland boundaries. We look forward to meeting with you on site at your earliest convenience to review the wetland line. Please let us know if you have any questions.

Thank you for your assistance.

Sincerely,

Scarlett Henson
Staff Scientist
Davey Resource Group, Inc.

Enclosure: Data Package
cc: Stroud Engineering – Linwood Stroud

Phone: 910.452.0001
3805 Wrightsville Ave., Suite 15, Wilmington, NC 28403
daveyresourcegroup.com/carolinas

DAVEY Resource Group

AGENT AUTHORIZATION FORM

TO WHOM IT MAY CONCERN:

I/we, the undersigned, hereby authorize Davey Resource Group to act as our agent in the determination of jurisdictional wetland boundaries on the subject property, **Beltway-Stroud Tract.** By way of this form, I/we additionally authorize access to the site by representatives of the US Army Corps of Engineers and/or the NC Division of Coastal Management for the purpose of reviewing the flagged wetland boundary and providing a final jurisdictional determination. Any questions regarding the jurisdictional wetland determination should be directed to Davey Resource Group.

Please provide the following information:

Property Address and Parcel ID Number: **125 Bertram Rd; Beaufort, NC**

Parcel ID# 731609161556000

Current Property Owner Name: **Bertram Rental Properties LLC**

Owner Address, Phone Number, & Email Address:

Address: 416 Victoria Hills Dr; Fuquay Varina, NC 27526

Email: bertram.kelly@gmail.com mickeybertram@bellsouth.net

Phone: 919 817 1837 843 276 3472

Notice: This authorization, for liability & professional courtesy reasons, is valid only for government officials to enter the property when accompanied by Davey Resource Group staff. Please call DRG to arrange a site meeting prior to visiting the site.

Bertram Rental Properties, LLC

Print Owner's Name

DocuSigned by: kelly Bertram D90B693C7963421...

DocuSigned by: Mickey Bertram 8642BC0B9EB2471...

Owner's Signature

3/28/2022 3/28/2022

Date

Phone: 910.452.0001
3805 Wrightsville Ave., Suite 15, Wilmington, NC 28403
daveyresourcegroup.com/carolinas

DAVEY Resource Group

AGENT AUTHORIZATION FORM

TO WHOM IT MAY CONCERN:

I/we, the undersigned, hereby authorize Davey Resource Group to act as our agent in the determination of jurisdictional wetland boundaries on the subject property, **Beltway-Stroud Tract.** By way of this form, I/we additionally authorize access to the site by representatives of the US Army Corps of Engineers and/or the NC Division of Coastal Management for the purpose of reviewing the flagged wetland boundary and providing a final jurisdictional determination. Any questions regarding the jurisdictional wetland determination should be directed to Davey Resource Group.

Please provide the following information:

Property Address and Parcel ID Number: **1980 Live Oak St; Beaufort, NC**

Parcel ID# 731609167703000

Current Property Owner Name: **Bertie Eubanks Neely**

Owner Address, Phone Number, & Email Address:

Address: 846 Neely Road; Asheboro, NC 27203

Email: h.hill.nursery@gmail.com

Phone: N/A

Notice: This authorization, for liability & professional courtesy reasons, is valid only for government officials to enter the property when accompanied by Davey Resource Group staff. Please call DRG to arrange a site meeting prior to visiting the site.

Bertie Eubanks Neely
Print Owner's Name

Bertie Eubanks Neely
Owner's Signature

3/28/22
Date

Phone: 910.452.0001
3805 Wrightsville Ave., Suite 15, Wilmington, NC 28403
daveyresourcegroup.com/carolinas

DAVEY Resource Group

AGENT AUTHORIZATION FORM

TO WHOM IT MAY CONCERN:

I/we, the undersigned, hereby authorize Davey Resource Group to act as our agent in the determination of jurisdictional wetland boundaries on the subject property, **Beltway-Stroud Tract.** By way of this form, I/we additionally authorize access to the site by representatives of the US Army Corps of Engineers and/or the NC Division of Coastal Management for the purpose of reviewing the flagged wetland boundary and providing a final jurisdictional determination. Any questions regarding the jurisdictional wetland determination should be directed to Davey Resource Group.

Please provide the following information:

Property Address and Parcel ID Number: **Pinners Point Rd; Beaufort, NC**

Parcel ID# 731609066438000 & 731609153648000

Current Property Owner Name: **Peart G West Trustee**

Owner Address, Phone Number, & Email Address:

Address: 231 Pinners Point Road; Beaufort, NC 28516

Email: abweskin@att.net

Phone: 678 613 8917

Notice: This authorization, for liability & professional courtesy reasons, is valid only for government officials to enter the property when accompanied by Davey Resource Group staff. Please call DRG to arrange a site meeting prior to visiting the site.

Roberta D. West, successor trustee of Pearl West RLT

Print Owner's Name

DocuSigned by:
Roberta D West

Owner's Signature

3/28/2022

Date

Phone: 910.452.0001
3805 Wrightsville Ave., Suite 15, Wilmington, NC 28403
daveyresourcegroup.com/carolinas

A. PARCEL INFORMATION

Street Address: East Side of US Hwy 70 Bus

City, State: Beaufort, NC

County: Carteret

Parcel Index Number(s) (PIN): 731609066438000, 73160915364

B. REQUESTOR INFORMATION

Name: Stroud Engineering - Linwood Stroud

Mailing Address: 3225 McLeod Drive #110

Las Vegas, Nevada, 89121

Telephone Number: 252-756-9352 x127

Electronic Mail Address: lstroud@stroudengineer.com

Select one:

- ☐ I am the current property owner.
- ☐ I am an Authorized Agent or Environmental Consultant[1]
- ☑ Interested Buyer or Under Contract to Purchase
- ☐ Other, please explain. _____

C. PROPERTY OWNER INFORMATION[2]

Name: See attached

Mailing Address: See attached

Telephone Number: See attached

Electronic Mail Address: See attached

[1] Must provide completed Agent Authorization Form/Letter.

[2] Documentation of ownership also needs to be provided with request (copy of Deed, County GIS/Parcel/Tax Record).

D. PROPERTY ACCESS CERTIFICATION[3,4]

By signing below, I authorize representatives of the Wilmington District, U.S. Army Corps of Engineers (Corps) to enter upon the property herein described for the purpose of conducting on-site investigations, if necessary, and issuing a jurisdictional determination pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. I, the undersigned, am either a duly authorized owner of record of the property identified herein, or acting as the duly authorized agent of the owner of record of the property.

Bertram Rental Properties LLC
Print Name

Capacity: ☑ Owner ☐ Authorized Agent[5]

3/28/2022
Date

DocuSigned by: Mickey Bertram 8642BC0B9FB2471...
DocuSigned by: Kelly Bertram D90B693C7963421...
Signature

E. REASON FOR JD REQUEST: (Check as many as applicable)

☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
☑ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
☐ A Corps JD is required in order obtain my local/state authorization.
☐ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
☐ I believe that the site may be comprised entirely of dry land.
☐ Other: _____

[3] For NCDOT requests following the current NCDOT/USACE protocols, skip to Part E.
[4] If there are multiple parcels owned by different parties, please provide the following for each additional parcel on a continuation sheet.
[5] Must provide agent authorization form/letter signed by owner(s).

D. PROPERTY ACCESS CERTIFICATION[3,4]

By signing below, I authorize representatives of the Wilmington District, U.S. Army Corps of Engineers (Corps) to enter upon the property herein described for the purpose of conducting on-site investigations, if necessary, and issuing a jurisdictional determination pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. I, the undersigned, am either a duly authorized owner of record of the property identified herein, or acting as the duly authorized agent of the owner of record of the property.

Bertie Eubanks Neely
Print Name

Capacity: ☑ Owner ☐ Authorized Agent[5]

3/28/2022
Date

Bertie Eubanks Neely
Signature

E. REASON FOR JD REQUEST: (Check as many as applicable)

☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
☑ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
☐ A Corps JD is required in order obtain my local/state authorization.
☐ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
☐ I believe that the site may be comprised entirely of dry land.
☐ Other: _____

[3] For NCDOT requests following the current NCDOT/USACE protocols, skip to Part E.
[4] If there are multiple parcels owned by different parties, please provide the following for each additional parcel on a continuation sheet.
[5] Must provide agent authorization form/letter signed by owner(s).

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By signing below, I authorize representatives of the Wilmington District, U.S. Army Corps of Engineers (Corps) to enter upon the property herein described for the purpose of conducting on-site investigations, if necessary, and issuing a jurisdictional determination pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. I, the undersigned, am either a duly authorized owner of record of the property identified herein, or acting as the duly authorized agent of the owner of record of the property.

Pearl G West Revocable Living Trust

Print Name

Capacity: ☑ Owner ☐ Authorized Agent[5]

3/28/2022

Date

DocuSigned by:
Roberta D West
BA332A993EBD472...

Signature

E. REASON FOR JD REQUEST: (Check as many as applicable)

☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.

☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.

☑ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.

☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.

☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.

☐ A Corps JD is required in order obtain my local/state authorization.

☐ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.

☐ I believe that the site may be comprised entirely of dry land.

☐ Other: _____

[3] For NCDOT requests following the current NCDOT/USACE protocols, skip to Part E.

[4] If there are multiple parcels owned by different parties, please provide the following for each additional parcel on a continuation sheet.

[5] Must provide agent authorization form/letter signed by owner(s).

F. JURISDICTIONAL DETERMINATION (JD) TYPE (Select One)

☑ I am requesting that the Corps provide a preliminary JD for the property identified herein.

A Preliminary Jurisdictional Determination (PJD) provides an indication that there may be "waters of the United States" or "navigable waters of the United States"on a property. PJDs are sufficient as the basis for permit decisions. For the purposes of permitting, all waters and wetlands on the property will be treated as if they are jurisdictional "waters of the United States". PJDs cannot be appealed (33 C.F.R. 331.2); however, a PJD is "preliminary" in the sense that an approved JD can be requested at any time. PJDs do not expire.

☐ I am requesting that the Corps provide an approved JD for the property identified herein.

An Approved Jurisdictional Determination (AJD) is a determination that jurisdictional "waters of the United States" or "navigable waters of the United States" are either present or absent on a site. An approved JD identifies the limits of waters on a site determined to be jurisdictional under the Clean Water Act and/or Rivers and Harbors Act. Approved JDs are sufficient as the basis for permit decisions. AJDs are appealable (33 C.F.R. 331.2). The results of the AJD will be posted on the Corps website. A landowner, permit applicant, or other "affected party" (33 C.F.R. 331.2) who receives an AJD may rely upon the AJD for five years (subject to certain limited exceptions explained in Regulatory Guidance Letter 05-02).

☐ I am unclear as to which JD I would like to request and require additional information to inform my decision.

G. ALL REQUESTS

☑ Map of Property or Project Area. This Map must clearly depict the boundaries of the review area.

☑ Size of Property or Review Area 85 acres.

☑ The property boundary (or review area boundary) is clearly physically marked on the site.

H. REQUESTS FROM CONSULTANTS

☑ Project Coordinates (Decimal Degrees): Latitude: 34.733749,
Longitude: -76.631705

☑ A legible delineation map depicting the aquatic resources and the property/review area. Delineation maps must be no larger than 11x17 and should contain the following: (Corps signature of submitted survey plats will occur after the submitted delineation map has been reviewed and approved).[6]

- North Arrow
- Graphical Scale
- Boundary of Review Area
- Date
- Location of data points for each Wetland Determination Data Form or tributary assessment reach.

For Approved Jurisdictional Determinations:

- Jurisdictional wetland features should be labeled as Wetland Waters of the US, 404 wetlands, etc. Please include the acreage of these features.
- Jurisdictional non-wetland features (i.e. tidal/navigable waters, tributaries, impoundments) should be labeled as Non-Wetland Waters of the US, stream, tributary, open water, relatively permanent water, pond, etc. Please include the acreage or linear length of each of these features as appropriate.
- Isolated waters, waters that lack a significant nexus to navigable waters, or non-jurisdictional upland features should be identified as Non-Jurisdictional. Please include a justification in the label regarding why the feature is non-jurisdictional (i.e. "Isolated", "No Significant Nexus", or "Upland Feature"). Please include the acreage or linear length of these features as appropriate.

For Preliminary Jurisdictional Determinations:

- Wetland and non-wetland features should not be identified as Jurisdictional, 404, Waters of the United States, or anything that implies jurisdiction. These features can be identified as Potential Waters of the United States, Potential Non-wetland Waters of the United States, wetland, stream, open water, etc. Please include the acreage and linear length of these features as appropriate.

☑ Completed Wetland Determination Data Forms for appropriate region
(at least one wetland and one upland form needs to be completed for each wetland type)

[6] Please refer to the guidance document titled "Survey Standards for Jurisdictional Determinations" to ensure that the supplied map meets the necessary mapping standards. http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Jurisdiction/

- [x] Completed appropriate Jurisdictional Determination form
  - **PJDs,** please complete a Preliminary Jurisdictional Determination Form[7] and include the Aquatic Resource Table
  - **AJDs**, please complete an Approved Jurisdictional Determination Form[8]
- [x] Vicinity Map
- [x] Aerial Photograph
- [x] USGS Topographic Map
- [x] Soil Survey Map
- [x] Other Maps, as appropriate (e.g. National Wetland Inventory Map, Proposed Site Plan, previous delineation maps, LIDAR maps, FEMA floodplain maps)
- [ ] Landscape Photos (if taken)
- [ ] NCSAM and/or NCWAM Assessment Forms and Rating Sheets
- [ ] NC Division of Water Resources Stream Identification Forms
- [ ] Other Assessment Forms

[7] www.saw.usace.army.mil/Portals/59/docs/regulatory/regdocs/JD/RGL_08-02_App_A_Prelim_JD_Form_fillable.pdf
[8] Please see http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Jurisdiction/

Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

Property Owner Contact Information

Pearl G West Trustee

Mailing Address: 231 Pinners Point Rd; Beaufort, NC

Phone: 678-613-8917

Email: abweskin@att.net

Bertie Eubanks Neely

Mailing Address: 846 Neely Rd; Asheboro, NC

Phone: N/A

Email: h.hill.nursery@gmail.com

Bertram Rental Properties

Mailing Address: 416 Victoria Hills Dr; Fuquay Varina, NC

Phone: 919-817-1837

Email: Bertram.kelly@gmail.com

Tax Parcel Information:

Carteret County, N.C.

Owner: WEST,PEARL G TRUSTEE

Current PIN: 731609066438000

Site Address:
0

Mailing Address:
231 PINNERS POINT ROAD

BEAUFORT NC 28516

Legal Description:
TR 2 PEARL G WEST - BEAUFORT

Prior PIN:

City Limits:

Rescue District: BEAUFORT RESCUE

Fire District: BEAUFORT FIRE

Tax District: 11

Township: BEAUFORT

Use: VACANT

Land Value: $464,718

Bldg Value: $0

Other Value: $0

Total Value: $464,718

Sale Price: $0

Deeded Acres: 7.92

Plat Ref: 32 / 92

Deed Ref: 1327 / 241

Bedrooms:

NBHD: 110002

Bldg Htd Sq Ft:

Bldg Tot Sq Ft: 0

Year Built:

Noise Level:

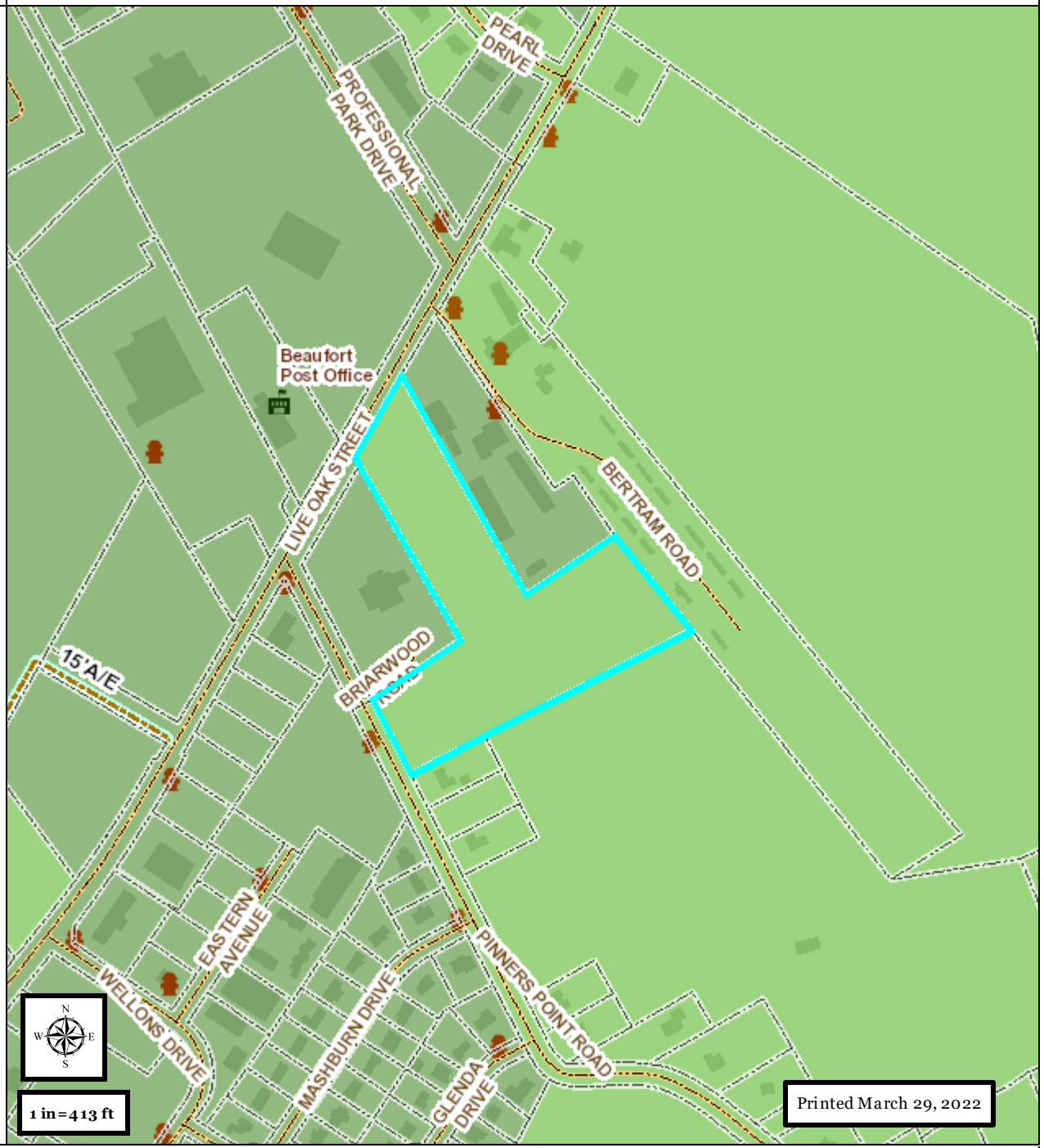
AICUZ Zone:

GIS Acres: 7.830

Roll Type: R

Deed Date: 0

Bathrooms:



Tax Parcel Information:

Carteret County, N.C.

Owner: WEST,PEARL G TRUSTEE

Current PIN: 731609153648000

Site Address:
0

Mailing Address:
231 PINNERS POINT ROAD

BEAUFORT NC 28516

Legal Description:
PT TR 2 PEARL G WEST

Prior PIN:

City Limits:

Rescue District: BEAUFORT RESCUE

Fire District: BEAUFORT FIRE

Tax District: 11

Township: BEAUFORT

Use: VACANT

Land Value: $53,198

Bldg Value: $0

Other Value: $0

Total Value: $53,198

Sale Price: $0

Deeded Acres: 25.84

Plat Ref: 31 / 989

Deed Ref: 1327 / 241

Bedrooms:

NBHD: 110002

Bldg Htd Sq Ft:

Bldg Tot Sq Ft: 0

Year Built:

Noise Level:

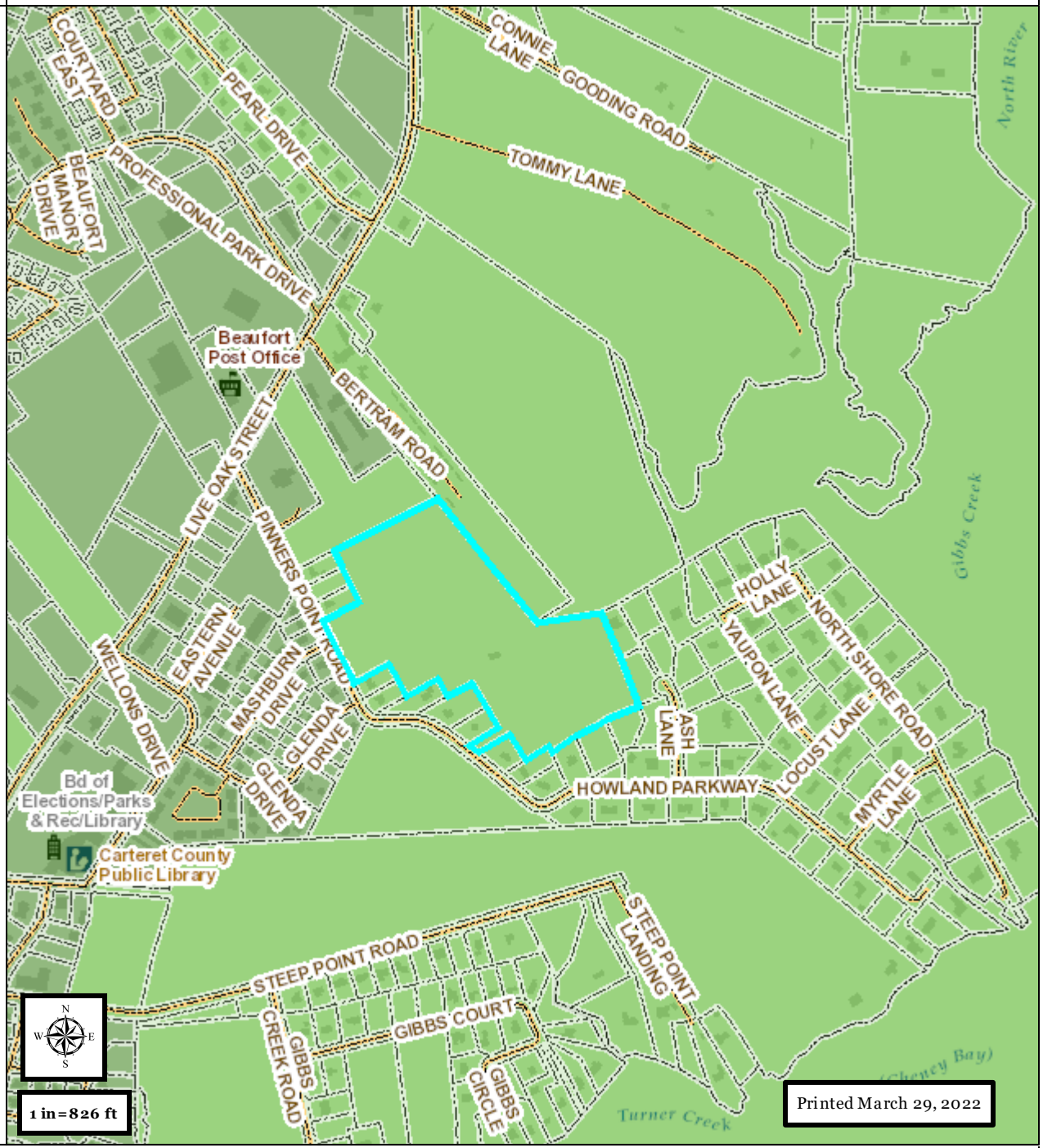
AICUZ Zone:

GIS Acres: 24.400

Roll Type: R

Deed Date: 0

Bathrooms:



Tax Parcel Information:

Carteret County, N.C.

Owner: BERTRAM RENTAL PROPERTIES LLC

Current PIN: 731609161556000

Site Address:
125 BERTRAM RD
BEAUFORT

Mailing Address:
416 VICTORIA HILLS DR

FUQUAY VARINA NC 27526

Legal Description:
ACREAGE OFF HWY 70 - BEAUFORT

Prior PIN: 11014C0107

City Limits:

Rescue District: BEAUFORT RESCUE

Fire District: BEAUFORT FIRE

Tax District: 11

Township: BEAUFORT

Use: MOBILE HOME PARK

Land Value: $0

Bldg Value: $182,248

Other Value: $45,538

Total Value: $227,786

Sale Price: $0

Deeded Acres:

Plat Ref: 33 / 28

Deed Ref: 1580 / 14

Bedrooms: 0

NBHD: 110002

Bldg Htd Sq Ft: 4288

Bldg Tot Sq Ft: 4,288

Year Built: 1967

Noise Level:

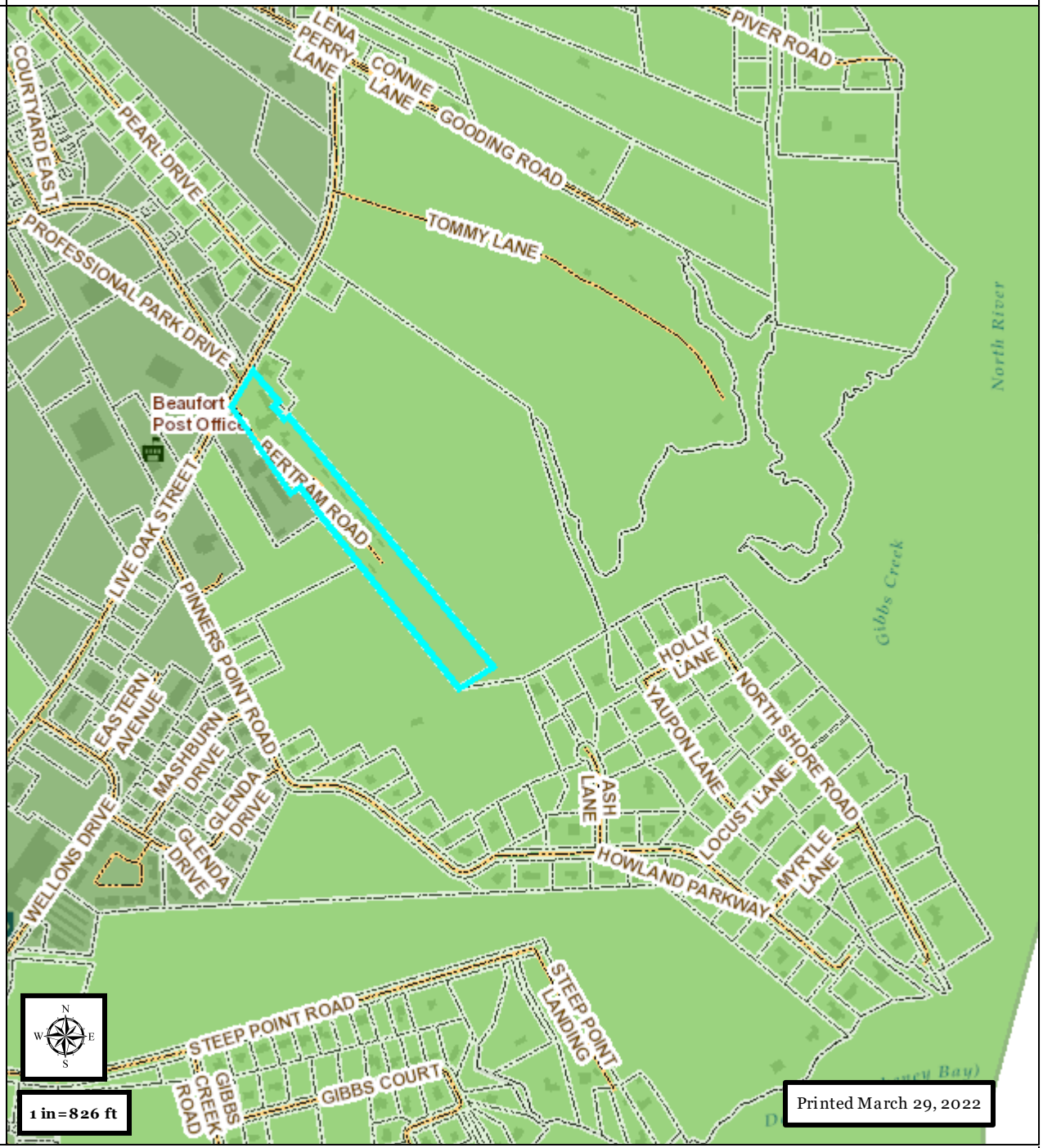
AICUZ Zone:

GIS Acres: 9.850

Roll Type: R

Deed Date: 20170627

Bathrooms: 0.5



Tax Parcel Information:

Carteret County, N.C.

Owner: NEELY,BERTIE EUBANKS

Current PIN: 731609167703000

Site Address:
1980 LIVE OAK ST
BEAUFORT

Mailing Address:
846 NEELY RD

ASHEBORO NC 27203

Legal Description:
ACREAGE HWY 70E HOWLAND ROCK

Prior PIN: 11014C0110

City Limits:

Rescue District: BEAUFORT RESCUE

Fire District: BEAUFORT FIRE

Tax District: 1175

Township: BEAUFORT

Use: RESIDENTIAL

Land Value: $335,560

Bldg Value: $0

Other Value: $0

Total Value: $335,560

Sale Price: $0

Deeded Acres: 42.39

Plat Ref: /

Deed Ref: 330 / 258

Bedrooms: 3

NBHD: 110002

Bldg Htd Sq Ft: 1281

Bldg Tot Sq Ft: 1,966

Year Built: 1910

Noise Level:

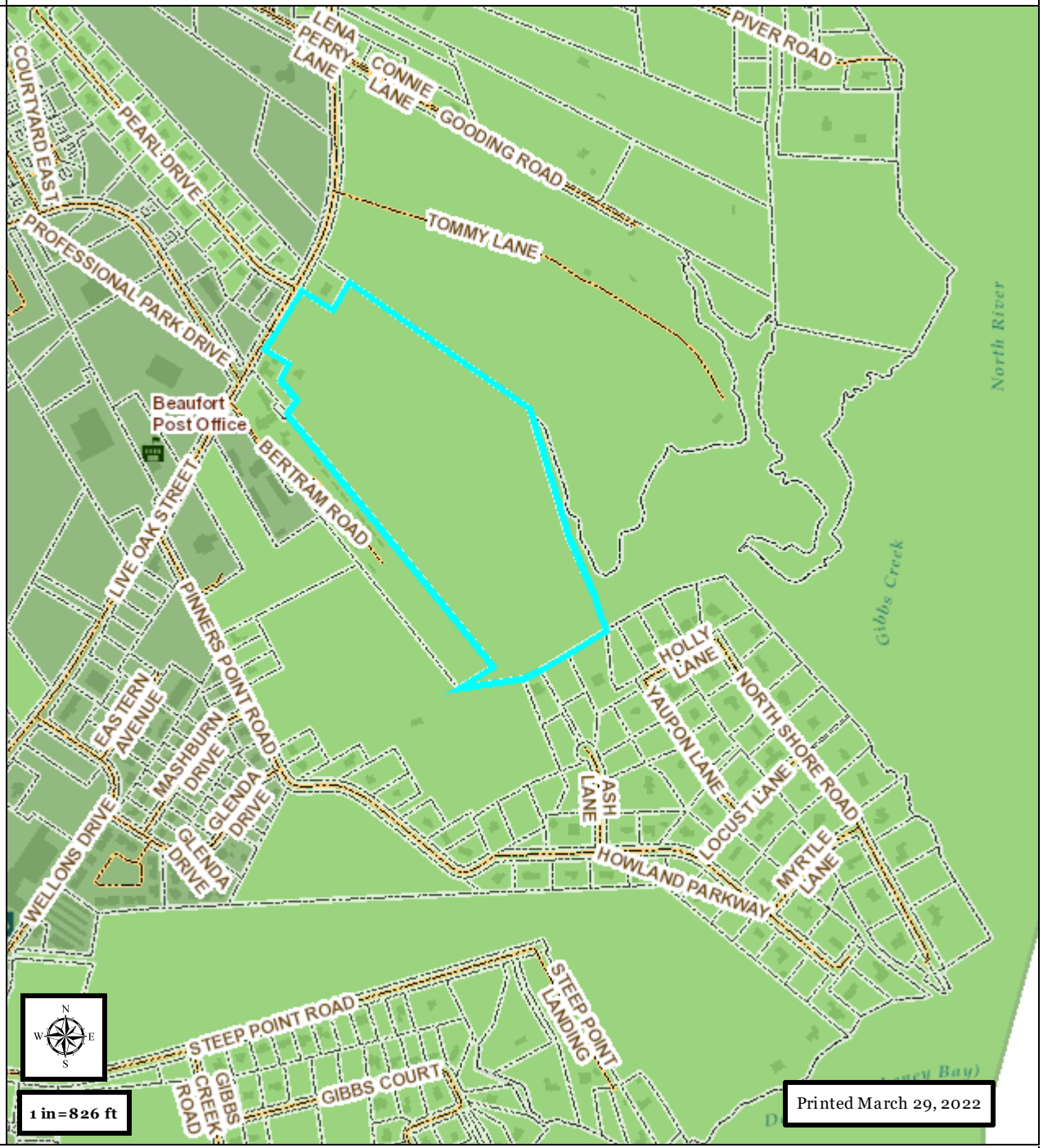
AICUZ Zone:

GIS Acres: 42.384

Roll Type: R

Deed Date: 0

Bathrooms: 1



L:\Wetlands\2021 Wetlands Files\DRGNCW21.274\Maps

Boundaries are approximate and not meant to be absolute.

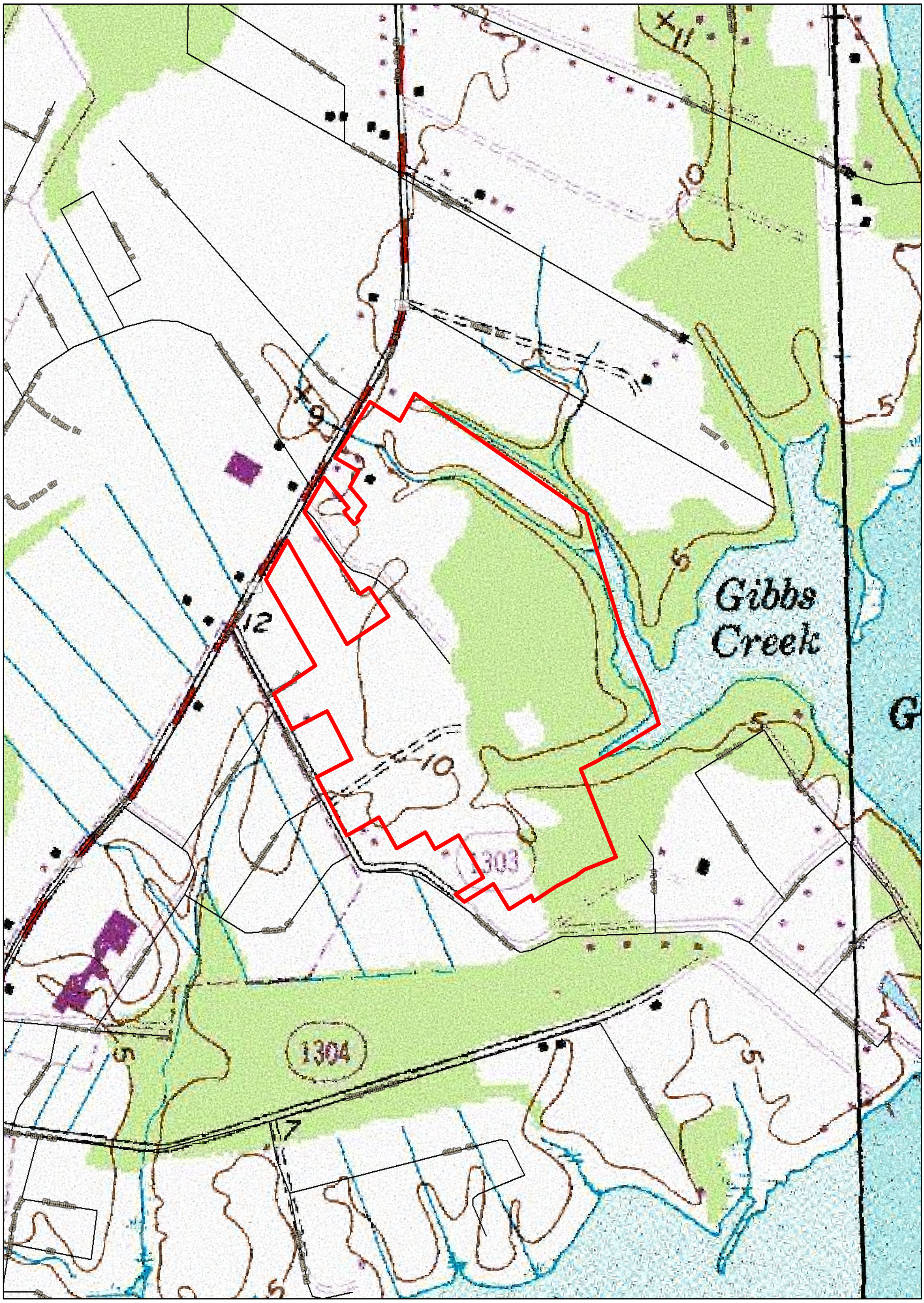
Map Source: OpenStreetMap

N

0 1,000 2,000 4,000 ft

Scale applies to 11X17" print.

Beltway-Stroud Tract Carteret County, NC March, 2022 DRGNCW21.274	DAVEY Resource Group 3805 Wrightsville Avenue Wilmington, NC 28403 (910) 452-0001	**Figure 1** **Vicinity Map**



L:\Wetlands\2021 Wetlands Files\DRGNCW21.274\Maps
Boundaries are approximate and not meant to be absolute.
Map Source: USGS Topographic 7.5 Minute Beaufort, Harkers Island

N

0 250 500 1,000 ft

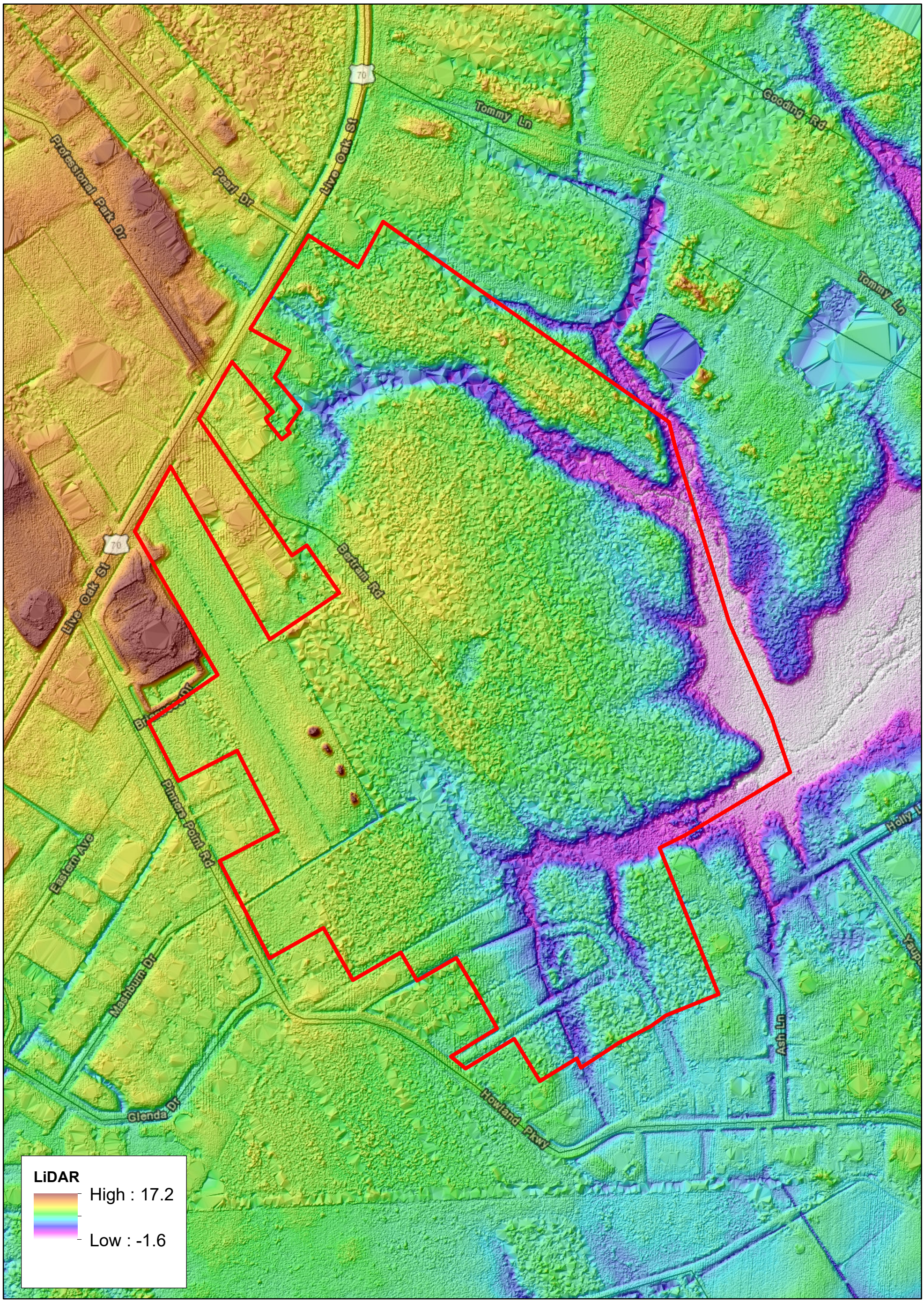
Scale applies to 11X17" print.

Beltway-Stroud Tract
Carteret County, NC

March, 2022
DRGNCW21.274

DAVEY Resource Group
3805 Wrightsville Avenue
Wilmington, NC 28403
(910) 452-0001

Figure 2
Topographic Map



L:\Wetlands\2021 Wetlands Files\DRGNCW21.274\Maps

Boundaries are approximate and not meant to be absolute.

Map Source: NC Floodplain Mapping Program 2014 QL2 LiDR Data

N

0 150 300 600 ft

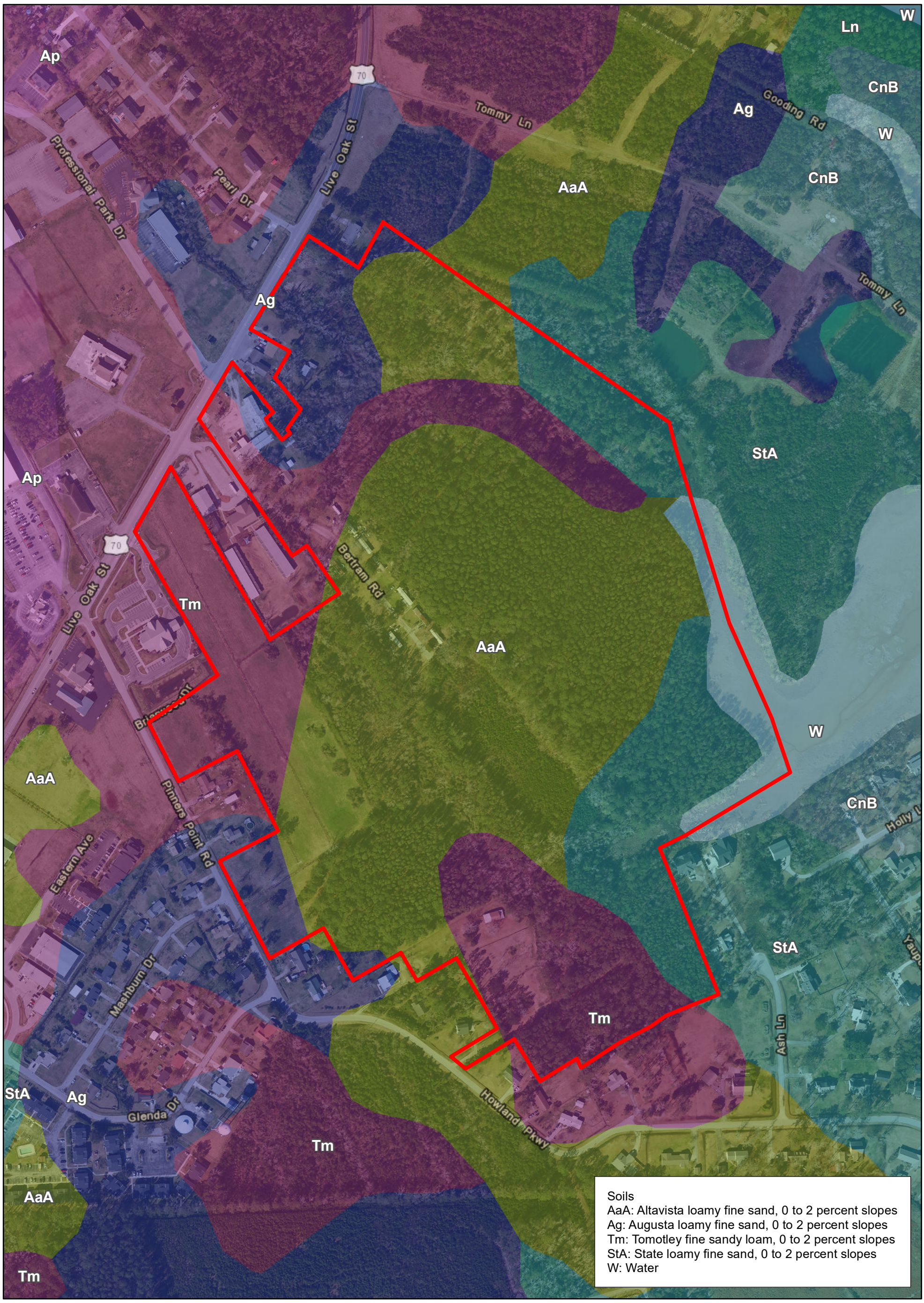
Scale applies to 11X17" print.

Beltway-Stroud Tract
Carteret County, NC

March, 2022
DRGNCW21.274

DAVEY Resource Group
3805 Wrightsville Avenue
Wilmington, NC 28403
(910) 452-0001

Figure 3
LiDAR Map



L:\Wetlands\2021 Wetlands Files\DRGNCW21.274\Maps

Boundaries are approximate and not meant to be absolute.

Map Source: GIS Soils Data Carteret County

N

0 150 300 600 ft

Scale applies to 11X17" print.

Beltway-Stroud Tract
Carteret County, NC

March, 2022
DRGNCW21.274

DAVEY Resource Group
3805 Wrightsville Avenue
Wilmington, NC 28403
(910) 452-0001

Figure 4
Soils Map

L:\Wetlands\2021 Wetlands Files\DRGNCW21.274\Maps
Boundaries are approximate and not meant to be absolute.
Map Source: NAPP 1998 Infrared Imagery Carteret County

N

0 150 300 600 ft

Scale applies to 11X17" print.

Beltway-Stroud Tract
Carteret County, NC

March, 2022
DRGNCW21.274

DAVEY Resource Group
3805 Wrightsville Avenue
Wilmington, NC 28403
(910) 452-0001

Figure 5
1998 Infrared Map

L:\Wetlands\2021 Wetlands Files\DRGNCW21.274\Maps
Boundaries are approximate and not meant to be absolute.
Map Source: 2020 NC OneMap

N

0 150 300 600 ft

Scale applies to 11X17" print.

Beltway-Stroud Tract
Carteret County, NC

March, 2022
DRGNCW21.274

DAVEY Resource Group
3805 Wrightsville Avenue
Wilmington, NC 28403
(910) 452-0001

Figure 6
Current Aerial

This is not a survey. All boundaries and distances are considered approximate. This represents a preliminary sketch prepared from field notes. A formal delineation and review and approval by the US Army Corps of Engineers and NC DCM is recommended prior to specific site planning.

p136-p141
DP1
p134
c1
DP2
n74
p100
a1-a15
DP3
p50
n1
c109
p1

Legend

- Project Area ~85.0 ac
- Potential Uplands ~74.2 ac (87%)
- Potential Coastal Wetlands ~4.6 ac (5%)
- Potential 404 Wetlands ~6.2 ac (7%)
- Potential Normal High Water Line
- Potential Waters of the US (Non-Stream) ~540 LF
- Potential Non-Jurisdictional Ditches ~5,210 LF
- Data Points

L:\Wetlands\2021 Wetlands Files\DRGNCW21.274\Maps
Boundaries are approximate and not meant to be absolute.
Map Source: 2020 NC One Map Aerial Photography

N

0 150 300 600 ft

Scale applies to 11X17" print.

Beltway-Stroud Tract
Carteret County, NC

03/29/2022
DRGNCW21.274

DAVEY Resource Group
3805 Wrightsville Avenue
Wilmington, NC 28403
(910) 452-0001

Section 404/401 Delineation Preliminary Sketch

This is not a survey. All boundaries and distances are considered approximate. This represents a preliminary sketch prepared from field notes. A formal delineation and review and approval by the US Army Corps of Engineers and NC DCM is recommended prior to specific site planning.

p136-p141
W3
NS1
DP1
W1
p134
c1
DP2
n74
p100
a1-a15
DP3
W4
p50
C1
n1
c109
W2
p1
NS2
NS3

Legend

- Project Area ~85.0 ac
- Potential Uplands ~74.2 ac (87%)
- Potential Coastal Wetlands ~4.6 ac (5%)
- Potential 404 Wetlands ~6.2 ac (7%)
- Potential Normal High Water Line
- Potential Waters of the US (Non-Stream) ~540 LF
- Potential Non-Jurisdictional Ditches ~5,210 LF
- Data Points

L:\Wetlands\2021 Wetlands Files\DRGNCW21.274\Maps
Boundaries are approximate and not meant to be absolute.
Map Source: 2020 NC One Map Aerial Photography

N

0 150 300 600 ft

Scale applies to 11X17" print.

Beltway-Stroud Tract
Carteret County, NC

03/29/2022
DRGNCW21.274

DAVEY Resource Group
3805 Wrightsville Avenue
Wilmington, NC 28403
(910) 452-0001

Section 404/401 Delineation Preliminary Sketch (PJD Reference)

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region
See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Beltway-Stroud Tract City/County: Beaufort/Carteret Sampling Date: 7/28/21

Applicant/Owner: Stroud Engineering - Linwood Stroud State: NC Sampling Point: DP 1 upland

Investigator(s): Paul Farley - DRG Section, Township, Range:

Landform (hillside, terrace, etc.): sideslope Local relief (concave, convex, none): convex Slope (%): 2

Subregion (LRR or MLRA): LRR T, MLRA 153B Lat: 34.736501 Long: -76.632310 Datum: NAD 83

Soil Map Unit Name: AaA: Altavista loamy fine sand, 0 to 2 percent slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
According to Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network, normal conditions were present at the time of the field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum Moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes ____	No x	Depth (inches): 20
Saturation Present? (includes capillary fringe)	Yes ____	No x	Depth (inches): 20

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No visible hydrology indicators to 20"

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP 1 upland

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	40	Yes	FAC
2. *Liquidambar styraciflua*	25	Yes	FAC
3. *Quercus nigra*	15	No	FAC
4.			
5.			
6.			
7.			
8.			
	80	=Total Cover	
50% of total cover: 40		20% of total cover:	16
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Liquidambar styraciflua*	5	Yes	FAC
2. *Pinus taeda*	10	Yes	FAC
3. *Persea palustris*	5	Yes	FACW
4.			
5.			
6.			
7.			
8.			
	20	=Total Cover	
50% of total cover: 10		20% of total cover:	4
Herb Stratum (Plot size: 30' radius)			
1. *Aristida stricta*	5	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5	=Total Cover	
50% of total cover: 3		20% of total cover:	1
Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitus rotundifolium*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	=Total Cover	
50% of total cover: 5		20% of total cover:	2

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	105	x 3 =	315
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	115 (A)		335 (B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: DP 1 upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Sandy	
6-12	10YR 4/4	100					Sandy	
12-20	10yr 6/4	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (**MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- ___ Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, T)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- ___ Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Typical profile found abouve floodplain/marsh

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region
See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Beltway-Stroud Tract City/County: Beaufort/Carteret Sampling Date: 7/28/21

Applicant/Owner: Stroud Engineering - Linwood Stroud State: NC Sampling Point: DP 1 wetland

Investigator(s): Paul Farley - DRG Section, Township, Range:

Landform (hillside, terrace, etc.): in wetland drain Local relief (concave, convex, none): concave Slope (%): 1-2

Subregion (LRR or MLRA): LRR T, MLRA 153B Lat: 34.736340 Long: -76.632222 Datum: NAD 83

Soil Map Unit Name: Tomotley NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
According to Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network, normal conditions were present at the time of the field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- x Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum Moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes x	No ____	Depth (inches): 6
Saturation Present? (includes capillary fringe)	Yes x	No ____	Depth (inches): 6

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP 1 wetland

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	60	Yes	FAC
2. *Acer rubrum*	30	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	90	=Total Cover	
50% of total cover: 45		20% of total cover:	18
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Acer rubrum*	15	Yes	FAC
2. *Carpinus caroliniana*	10	Yes	FAC
3. *Persea palustris*	5	No	FACW
4.			
5.			
6.			
7.			
8.			
	30	=Total Cover	
50% of total cover: 15		20% of total cover:	6
Herb Stratum (Plot size: 30' radius)			
1. *Aristida stricta*	5	Yes	FAC
2. *Osmunda cinamonead*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10	=Total Cover	
50% of total cover: 5		20% of total cover:	2
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below.)
Tpical vegetation for this particular landscape position

SOIL

Sampling Point: DP 1 wetland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/2	100					Mucky Loam/Clay	
10-20	10YR 3/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- X 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (**MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- ___ Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, T)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- ___ Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

U.S. Army Corps of Engineers **WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region** See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R	*OMB Control #: 0710-xxxx, Exp: Pending* *Requirement Control Symbol EXEMPT:* *(Authority: AR 335-15, paragraph 5-2a)*

Project/Site: Beltway-Stroud Tract City/County: Beaufort/Carteret Sampling Date: 7/28/21

Applicant/Owner: Stroud Engineering - Linwood Stroud State: NC Sampling Point: DP 2 upland

Investigator(s): Paul Farley - DRG Section, Township, Range:

Landform (hillside, terrace, etc.): sidelsloope Local relief (concave, convex, none): convex Slope (%): 2

Subregion (LRR or MLRA): LRR T, MLRA 153B Lat: 34.735805 Long: -76.629924 Datum: NAD 83

Soil Map Unit Name: AaA: Altavista loamy fine sand, 0 to 2 percent slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
According to Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network, normal conditions were present at the time of the field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum Moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes x	No ____	Depth (inches): 20
Saturation Present? (includes capillary fringe)	Yes x	No ____	Depth (inches): 20

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No visible hydrology indicators to 20"

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP 2 upland

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	40	Yes	FAC
2. *Liquidambar styraciflua*	15	Yes	FAC
3. *Quercus nigra*	10	No	FAC
4.			
5.			
6.			
7.			
8.			
	65	=Total Cover	
50% of total cover: 33	20% of total cover: 13		
Sapling/Shrub Stratum (Plot size: 30'r)			
1. *Liquidambar styraciflua*	5	Yes	FAC
2. *Pinus taeda*	10	Yes	FAC
3. *Persea palustris*	5	Yes	FACW
4.			
5.			
6.			
7.			
8.			
	20	=Total Cover	
50% of total cover: 10	20% of total cover: 4		
Herb Stratum (Plot size: 30'r)			
1. *Persea palustris*	2	Yes	FACW
2. *Aristida stricta*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	7	=Total Cover	
50% of total cover: 4	20% of total cover: 2		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: DP 2 upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/3	100					Sandy	
10-20	10YR 2/1	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (**MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- ___ Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, T)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- ___ Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Typical profile found abouve floodplain/marsh

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region
See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Beltway-Stroud Tract City/County: Beaufort/Carteret Sampling Date: 7/28/21

Applicant/Owner: Stroud Engineering - Linwood Stroud State: NC Sampling Point: DP 2 wet

Investigator(s): Paul Farley - DRG Section, Township, Range:

Landform (hillside, terrace, etc.): marsh Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR or MLRA): LRR T, MLRA 153B Lat: 34.735455 Long: -76.63008 Datum: NAD 83

Soil Map Unit Name: Tomotely NWI classification: E1UBL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
According to Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network, normal conditions were present at the time of the field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- x Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum Moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes x	No ____	Depth (inches): 2
Saturation Present? (includes capillary fringe)	Yes x	No ____	Depth (inches): 2

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP 2 wet

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 30'r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 30'r)			
1. *Cladium mariscus*	80	Yes	OBL
2. *Juncus effusus*	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90 =Total Cover		
50% of total cover: 45	20% of total cover: 18		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		100 (B)
Prevalence Index = B/A =			1.11

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below.)
Upper end of marsh

SOIL

Sampling Point: DP 2 wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	100					Mucky Sand	
6-20	10YR 2/1	100					Mucky Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- X 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (**MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- ___ Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, T)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- ___ Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region
See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Beltway-Stroud Tract City/County: Beaufort/Carteret Sampling Date: 07/28/2021

Applicant/Owner: Stroud Engineering - Linwood Stroud State: NC Sampling Point: DP3 Up

Investigator(s): Corey Novak - DRG Section, Township, Range:

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1-2

Subregion (LRR or MLRA): LRR T, MLRA 153B Lat: 34.733773 Long: -76.631387 Datum: NAD 83

Soil Map Unit Name: AaA: Altavista loamy fine sand, 0 to 2 percent slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
According to Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network, normal conditions were present at the time of the field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum Moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No OWT within 24 inches

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP3 Up

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	40	Yes	FAC
2. *Ilex opaca*	30	Yes	FAC
3. *Nyssa sylvatica*	20	No	FAC
4. *Pinus taeda*	10	No	FAC
5. *Quercus nigra*	10	No	FAC
6.	5	No	
7.			
8.			
	115	=Total Cover	
50% of total cover: 58		20% of total cover:	23
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Morella cerifera*	30	Yes	FAC
2. *Symplocos tinctoria*	20	Yes	FAC
3. *Vaccinium corymbosum*	10	No	FACW
4.			
5.			
6.			
7.			
8.			
	60	=Total Cover	
50% of total cover: 30		20% of total cover:	12
Herb Stratum (Plot size: 30' radius)			
1. *Toxicodendron radicans*	40	Yes	FAC
2. *Pteridium aquilinum*	20	Yes	FACU
3. *Vitis rotundifolia*	15	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	=Total Cover	
50% of total cover: 38		20% of total cover:	15
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: DP3 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Sandy	fine sand
18-24	10YR 5/3	100					Sandy	fine sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (**MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- ___ Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, T)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- ___ Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region
See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Beltway-Stroud Tract City/County: Beaufort/Carteret Sampling Date: 07/28/2021

Applicant/Owner: Stroud Engineering - Linwood Stroud State: NC Sampling Point: DP3 Wet

Investigator(s): Corey Novak - DRG Section, Township, Range:

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1-2

Subregion (LRR or MLRA): LRR T, MLRA 153B Lat: 34.73371 Long: -76.631722 Datum: NAD 83

Soil Map Unit Name: AaA: Altavista loamy fine sand, 0 to 2 percent slopes NWI classification: NAD 83

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
According to Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network, normal conditions were present at the time of the field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum Moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No OWT within 24 inches

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP3 Wet

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	20	Yes	FAC
2. *Nyssa sylvatica*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	30	=Total Cover	
50% of total cover: 15		20% of total cover:	6
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Liquidambar styraciflua*	30	Yes	FAC
2. *Acer rubrum*	20	Yes	FAC
3. *Pinus taeda*	10	No	FAC
4.			
5.			
6.			
7.			
8.			
	60	=Total Cover	
50% of total cover: 30		20% of total cover:	12
Herb Stratum (Plot size: 30' radius)			
1. *Carex lurida*	20	Yes	OBL
2. *Arundinaria tecta*	10	Yes	FACW
3. Unidentified herb	10	Yes	
4. *Osmunda spectabilis*	5	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45	=Total Cover	
50% of total cover: 23		20% of total cover:	9
Woody Vine Stratum (Plot size: 30' radius)			
1. *Smilax glauca*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	=Total Cover	
50% of total cover: 5		20% of total cover:	2

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: DP3 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-24	10YR 2/1	100					Mucky Sand	100% coated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- X 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (**MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- X Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- ___ Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, T)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- ___ Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

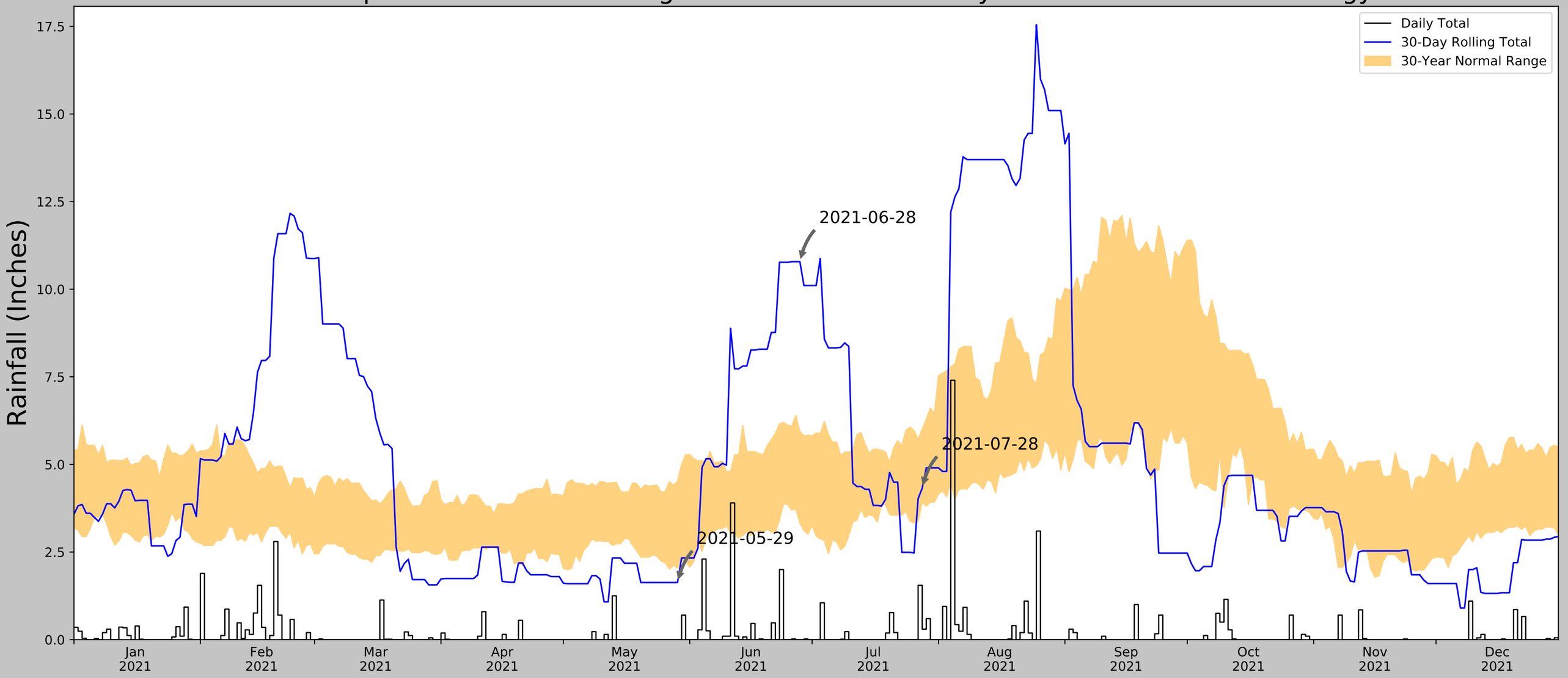
Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.733749, -76.631705
Observation Date	2021-07-28
Elevation (ft)	6.02
Drought Index (PDSI)	Severe wetness

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-07-28	3.926378	6.01063	4.322835	Normal	2	3	6
2021-06-28	3.334646	5.93937	10.787402	Wet	3	2	6
2021-05-29	2.045669	4.50748	1.629921	Dry	1	1	1
Result							Normal Conditions - 13

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
MOREHEAD CITY 2 WNW	34.7336, -76.7358	9.843	5.911	3.823	2.683	11251	90
MOREHEAD CITY 0.6 NW	34.73, -76.74	13.123	0.345	3.28	0.156	37	0
ATLANTIC BEACH WTP	34.6997, -76.7381	3.937	2.346	5.906	1.07	28	0
BEAUFORT MICHAEL J SMITH FLD	34.7336, -76.6606	11.155	4.27	1.312	1.927	13	0
NEWPORT/MOREHEAD CITY WFO	34.7764, -76.8769	29.856	8.538	20.013	4.013	21	0
CHERRY POINT MCAS	34.9, -76.8833	28.871	14.219	19.028	6.669	3	0

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD:

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Stroud Engineering - Linwood Stroud: 3225 McLeod Drive #110; Las Vegas, Nevada, 89121

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: NC County/parish/borough: Carteret City: Beaufort

Center coordinates of site (lat/long in degree decimal format):

Lat.: 34.733749 Long.: -76.631705

Universal Transverse Mercator: 18 S 350616.39 m E 3844729.64 m N

Name of nearest waterbody: Gibbs Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
C1	34.733457	-76.628721	4.6 ac	wetland	Section 10/404
W1	34.736260	-76.631456	4.03 ac	wetland	Section 404
W2	34.731989	-76.630941	1.85 ac	wetland	Section 404
W3	34.737003	-76.631379	0.04 ac	wetland	Section 404
NS1	34.736905	-76.633411	265.8 LF	non-wetland waters	Section 404
NS2	34.730998	-76.630989	270.5 LF	non-wetland waters	Section 404

Site number	Latitude	Longitude	Estimated amount of aquatic resource in review area	Type	Authority
NS3	34.730236	-76.630672	204 LF	non-wetland waters	Section 404
W4	34.733694	-76.631718	0.3 ac	wetland	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

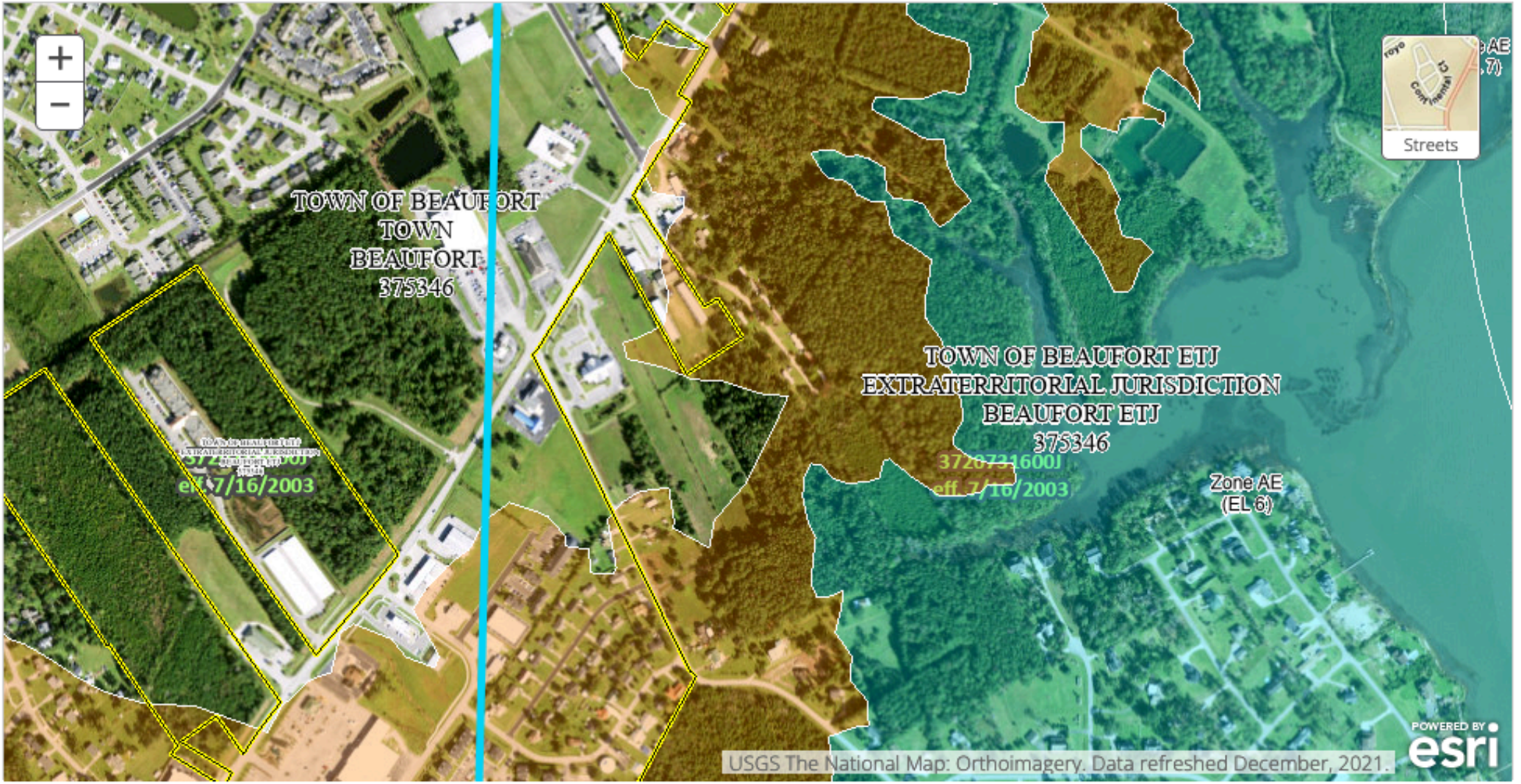
- [x] Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: Section 404/401 Delineation Preliminary Sketch (PJD reference).
- [x] Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - [ ] Office concurs with data sheets/delineation report.
  - [ ] Office does not concur with data sheets/delineation report. Rationale: _____.
- [ ] Data sheets prepared by the Corps: _____.
- [ ] Corps navigable waters' study: _____.
- [ ] U.S. Geological Survey Hydrologic Atlas: _____.
  - [ ] USGS NHD data.
  - [ ] USGS 8 and 12 digit HUC maps.
- [x] U.S. Geological Survey map(s). Cite scale & quad name: USGS Topographic 7.5 Minute Beaufort and Harkers Island.
- [x] Natural Resources Conservation Service Soil Survey. Citation: GIS Soils Data Carteret County.
- [ ] National wetlands inventory map(s). Cite name: _____.
- [ ] State/local wetland inventory map(s): _____.
- [ ] FEMA/FIRM maps: _____.
- [ ] 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- [x] Photographs: [x] Aerial (Name & Date): NAPP 1998 Infrared Imagery Carteret County; 2020 NC OneMap.
  or [ ] Other (Name & Date): _____.
- [ ] Previous determination(s). File no. and date of response letter: _____.
- [ ] Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

_____	_____
Signature and date of Regulatory staff member completing PJD	Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Appendix IV
Flood Map



PIN
- Approximate location based on user input and does not represent an authoritative property location

MAP PANELS
- Selected FloodMap Boundary
- Digital Data Available
- No Digital Data Available
- Unmapped

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*
- Otherwise Protected Area
- Coastal Barrier Resource System Area

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth
- Regulatory Floodway *Zone AE, AO, AH, VE, AR*

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

Appendix V

USFWS Species List and Critical Habitat Map

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Ecological Services Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
Phone: (919) 856-4520 Fax: (919) 856-4556

In Reply Refer To:
Project Code: 2022-0025673
Project Name: Salt Wind Preserve

March 29, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). If your project area contains suitable habitat for any of the federally-listed species on this species list, the proposed action has the potential to adversely affect those species. If suitable habitat is present, surveys should be conducted to determine the species' presence or absence within the project area. The use of this species list and/or North Carolina Natural Heritage program data should not be substituted for actual field surveys.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Migratory Birds
- Marine Mammals

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Raleigh Ecological Services Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
(919) 856-4520

Project Summary

Project Code: 2022-0025673
Event Code: None
Project Name: Salt Wind Preserve
Project Type: Clearing Land
Project Description: The proposed project area is located south of Live Oak Street and east of Pinners Point Road in Beaufort, North Carolina and has frontage along Gibbs Creek. The site is currently wooded or cleared land and is located in a mixed use area of Beaufort. The project consists of 81 residential lots (46 lots with an amenity lot in Phase 1 and 35 lots in Phase 2). The site is located on a relatively flat tract of land at approximately 5 feet above the National Geodetic Vertical Datum. The site includes the following Carteret County PIN numbers:
PIN: 731609167703000(42.39 acres)
731609153648000 (25.84 acres)
Eastern portion of 731609161556000 (Approximately 4 acres)

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@34.734286,-76.63096472777303,14z

Counties: Carteret County, North Carolina

Endangered Species Act Species

There is a total of 14 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened
West Indian Manatee *Trichechus manatus* There is **final** critical habitat for this species. The location of the critical habitat is not available. ***This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements.*** Species profile: https://ecos.fws.gov/ecp/species/4469	Threatened

Birds

NAME	STATUS
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Red-cockaded Woodpecker *Picoides borealis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7614	Endangered

Reptiles

NAME	STATUS
American Alligator *Alligator mississippiensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/776	Similarity of Appearance (Threatened)
Green Sea Turtle *Chelonia mydas* Population: North Atlantic DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
Kemp's Ridley Sea Turtle *Lepidochelys kempii* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5523	Endangered
Leatherback Sea Turtle *Dermochelys coriacea* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1493	Endangered
Loggerhead Sea Turtle *Caretta caretta* Population: Northwest Atlantic Ocean DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1110	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Rough-leaved Loosestrife *Lysimachia asperulaefolia* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2747	Endangered
Seabeach Amaranth *Amaranthus pumilus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8549	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel *Falco sparverius paulus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
American Oystercatcher *Haematopus palliatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8935	Breeds Apr 15 to Aug 31

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Gull-billed Tern *Gelochelidon nilotica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9501	Breeds May 1 to Jul 31
Henslow's Sparrow *Ammodramus henslowii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3941	Breeds elsewhere
Le Conte's Sparrow *Ammodramus leconteii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Ruddy Turnstone *Arenaria interpres morinella* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Swallow-tailed Kite *Elanoides forficatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Willet
BCC Rangewide
(CON)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Marine Mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

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1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NAME

West Indian Manatee *Trichechus manatus*

Species profile: https://ecos.fws.gov/ecp/species/4469

IPaC User Contact Information

Agency: Atlantic Shores Environmental Services Ltd
Name: Cheryl Moody
Address: 175-1 Venture Drive
City: Belville
State: NC
Zip: 28451
Email cmoody@atlanticshoresenv.com
Phone: 9103715980